STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

THIRD ANNUAL REPORT

TO THE
GOVERNOR OF CALIFORNIA
BY THE
DIRECTOR OF PUBLIC WORKS

JANUARY, 1950

L. A. Weymouth

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STATE OF CALIFORNIA

DEPARTMENT OF PUBLIC WORKS

DIVISION OF HIGHWAYS

THIRD ANNUAL REPORT

TO THE

GOVERNOR OF CALIFORNIA

BY THE

DIRECTOR OF PUBLIC WORKS

January, 1950

EARL WARREN

Governor

C. H. PURCELL

Director of Public Works and
Chairman, California Highway Commission

G. T. McCOY

State Highway Engineer and
Chief of Division of Highways

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STATE OF CALIFORNIA

DEPARTMENT OF PUBLIC WORKS

C. H. PURCELL, Director of Public Works

DIVISION OF HIGHWAYS

G. T. McCoy, Sacramento

State Highway Engineer and Chief of Division of Highways

HEADQUARTERS STAFF

Public Works Building, Sacramento

FRED J. GRUMM—Deputy State Highway Engineer

OPERATIONS

R. M. GILLIS—Assistant State Highway Engineer
EARL WITHYCOMBE—Construction Engineer
T. H. DENNIS—Maintenance Engineer
T. E. STANTON—Materials and Research Engineer
E. E. SORENSON—Equipment Engineer

ADMINISTRATION

RICHARD H. WILSON—Assistant State Highway Engineer
H. C. MCCARTY—Office Engineer
H. B. LAFORGE—Engineer County and Cooperative Projects
L. V. CAMPBELL—Engineer City and Cooperative Projects
MILTON HARRIS—Stores Engineer

PLANNING

J. W. VICKREY—Assistant State Highway Engineer
J. C. YOUNG—Traffic Engineer
A. M. NASH—Design Engineer
J. C. WOMACK—Planning Engineer
K. A. MACLACHLAN—Highway Planning Economist
H. L. KILE—Budget Engineer

BRIDGES

F. W. PANHORST—Assistant State Highway Engineer
STEWART MITCHELL—Design Engineer
I. O. JAHLSTROM—Bridge Construction Engineer
E. L. WALSH—Bridge Office Engineer
H. C. WOOD—San Francisco-Oakland Bay Bridge Engineer

PERSONNEL, SERVICE AGREEMENTS, ETC.

J. G. STANDLEY—Assistant State Highway Engineer
E. J. SALDINE—Principal Highway Engineer

RIGHT OF WAY

FRANK C. BALFOUR—Chief Right of Way Agent
R. S. J. PIANEZZI—Assistant Chief Right of Way Agent, Administration
E. M. MACDONALD—Assistant Chief Right of Way Agent, Appraisals
E. F. WAGNER—Assistant Chief Right of Way Agent, Field Supervision, South
G. S. PINGRY—Assistant Chief Right of Way Agent, Field Supervision, North

ACCOUNTING

E. R. HIGGINS—Comptroller
BERT SELLIER—Assistant Comptroller

DISTRICT ENGINEERS

District		Office
I.	G. F. Hellesoe	Eureka
II.	F. W. Haselwood	Redding
III.	C. H. Whitmore	Marysville
IV.	Jno. H. Skeggs, Assistant State Highway Engineer	San Francisco
	B. W. Booker, District Engineer	
	L. A. Weymouth, District Engineer	
V.	Lester H. Gibson	San Luis Obispo
VI.	E. T. Scott	Fresno
VII.	S. V. Cortelyou, Assistant State Highway Engineer	Los Angeles
	P. O. Harding, District Engineer	
	W. F. Fahey, District Engineer	
	M. E. Cessna, District Engineer	
VIII.	E. Q. Sullivan	San Bernardino
IX.	S. W. Lowden	Bishop
X.	C. E. Waite	Stockton
XI.	E. E. Wallace	San Diego

STATE OF CALIFORNIA

CALIFORNIA HIGHWAY COMMISSION

C. H. PURCELL, Chairman, Ex Officio, Sacramento
JAMES A. GUTHRIE, San Bernardino_____Term expires January 15, 1949
CHESTER H. WARLOW, Fresno_____Term expires January 15, 1949
HARRISON R. BAKER, Pasadena_____Term expires January 15, 1950
HOMER P. BROWN, Placerville_____Term expires January 15, 1951
C. ARNHOLT SMITH, San Diego_____Resigned January 1, 1949
CHARLES T. LEIGH, San Diego *_____Term expires January 15, 1951
F. WALTER SANDELIN, Ukiah_____Term expires January 15, 1952
GEO. W. SAVAGE, Secretary, Sacramento

CALENDAR OF MEETINGS
CALIFORNIA STATE HIGHWAY COMMISSION
July 1, 1948, to June 30, 1949

July 14 and 15, 1948_____San Francisco
August 18 and 19, 1948_____Sacramento
September 13, 14, and 15, 1948_____Sacramento
October 20 and 21, 1948_____Sacramento
November 17 and 18, 1948_____Sacramento
December 15 and 16, 1948_____Sacramento
January 26 and 27, 1949_____Sacramento
February 16 and 17, 1949_____Sacramento
March 16 and 17, 1949_____Sacramento
April 20 and 21, 1949_____Sacramento
May 18 and 19, 1949_____Sacramento
June 15 and 16, 1949_____Salinas

* Charles T. Leigh, appointed May 11, 1949, to complete the unexpired term of C. Arnholt Smith.

PAST MEMBERS OF THE CALIFORNIA HIGHWAY COMMISSION

Name	Residence	Date of appointment	Termination of membership
Burton A. Towne*	Lodi	Aug. 2, 1911	Resigned Jan. 14, 1914
Charles D. Blaney*	Saratoga	Aug. 2, 1911	Resigned Mar. 1, 1917
N. D. Darlington	Los Angeles	Aug. 2, 1911	Resigned Jan. 8, 1923
Charles F. Stern	Eureka	Jan. 15, 1914	Resigned Dec. 21, 1918
Henry J. Widenmann*	Vallejo	Mar. 1, 1917	Died Oct. 6, 1918
Charles A. Whitmore*	Visalia	Nov. 29, 1918	Resigned Jan. 8, 1923
Emmett Phillips*	Sacramento	Dec. 21, 1918	Died June 18, 1919
George C. Mansfield*	Oroville	June 24, 1919	Resigned Jan. 9, 1923
Harvey M. Toy	San Francisco	Jan. 9, 1923	Resigned Jan. 3, 1927
Louis Everding*	Arcata	Jan. 9, 1923	Resigned Jan. 17, 1927
Nelson T. Edwards	Orange	Jan. 10, 1923	Resigned Jan. 3, 1927
Ralph W. Bull*	Eureka	Jan. 6, 1927	Resigned Jan. 6, 1931
J. P. Baumgartner*	Santa Ana	Jan. 6, 1927	Resigned Jan. 6, 1931
M. B. Harris*	Fresno	April 18, 1927	Resigned Jan. 6, 1931
Joseph N. Schenck	Los Angeles	Aug. 19, 1927	Resigned Jan. 6, 1931
Fred S. Moody*	San Francisco	Aug. 19, 1927	Resigned Jan. 6, 1931
Earl Lee Kelly	Redding	Jan. 6, 1931	Resigned Oct. 18, 1932
Frank A. Tetley*	Riverside	Jan. 6, 1931	Resigned July 31, 1935
Timothy A. Reardon	San Francisco	Jan. 6, 1931	Resigned May 7, 1936
Harry A. Hopkins	Taft	Jan. 6, 1931	Resigned Oct. 14, 1937
C. D. Hamilton*	Banning	Aug. 1, 1935	Died April 24, 1936
Dr. W. W. Barham	Yreka	Dec. 20, 1932	Resigned May 21, 1935
Ray Ingels	Ukiah	May 21, 1935	Resigned Oct. 4, 1935
H. R. Judah	Santa Cruz	May 7, 1936	Resigned Oct. 5, 1937
Philip A. Stanton*	Anaheim	Jan. 6, 1931	Resigned Mar. 3, 1939
Paul G. Jasper*	Fortuna	May 7, 1936	Resigned Mar. 3, 1939
William T. Hart	Carlsbad	July 7, 1936	Resigned Mar. 3, 1939
Robert S. Redington	Los Angeles	Oct. 5, 1937	Resigned Jan. 27, 1939
Frank W. Clark	Los Angeles	Jan. 27, 1939	Resigned Mar. 10, 1939
Lawrence Barrett	San Francisco	Mar. 3, 1939	Resigned Jan. 11, 1943
Iener W. Nielsen	Fresno	Mar. 3, 1939	Resigned Jan. 11, 1943
Amerigo Bozzani	Los Angeles	Mar. 3, 1939	Resigned Jan. 11, 1943
Bert L. Vaughn	Jacumba	Mar. 3, 1939	Resigned Jan. 11, 1943
L. G. Hitchcock	Santa Rosa	Mar. 10, 1939	Resigned Jan. 11, 1943
†Gordon H. Garland	Sacramento	Jan. 11, 1943	Resigned Sept. 14, 1943
†Mrs. Dora Shaw Heffner	Sacramento	Jan. 11, 1943	Resigned Sept. 14, 1943
†Miss Helen MacGregor	Sacramento	Jan. 11, 1943	Resigned Sept. 14, 1943
†Verne Scoggins	Sacramento	Jan. 11, 1943	Resigned Sept. 14, 1943
†William Sweigert	Sacramento	Jan. 11, 1943	Resigned Sept. 14, 1943
C. Arnholt Smith	San Diego	Sept. 14, 1943	Resigned Jan. 1, 1949

* Deceased
† Member of the Interim Commission

Air View BALBOA PARKWAY in San Diego, U. S. 395

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

THIRD ANNUAL REPORT TO THE GOVERNOR ON THE ACTIVITIES OF THE DIVISION OF HIGHWAYS

FOR THE YEAR JULY 1, 1948, TO JUNE 30, 1949

HONORABLE EARL WARREN
Governor, State of California

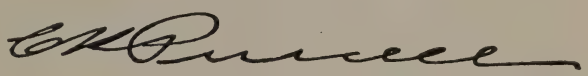
DEAR GOVERNOR WARREN: In accordance with the provisions of the Collier-Burns Act of 1947 amendments to Section 143 of the Streets and Highways Code it is my pleasure to submit to you the Third Annual Report of the Division of Highways, Department of Public Works, presenting a discussion of progress made in development of state highways under my direction during the Fiscal Year July 1, 1948, to June 30, 1949.

The report, as prepared and submitted to me by the State Highway Engineer, gives an accounting of highway activities during the second year of operation under Collier-Burns Act. It will be noted that the work accomplished on the expanded highway construction program attained a high level comparable to that of the previous year.

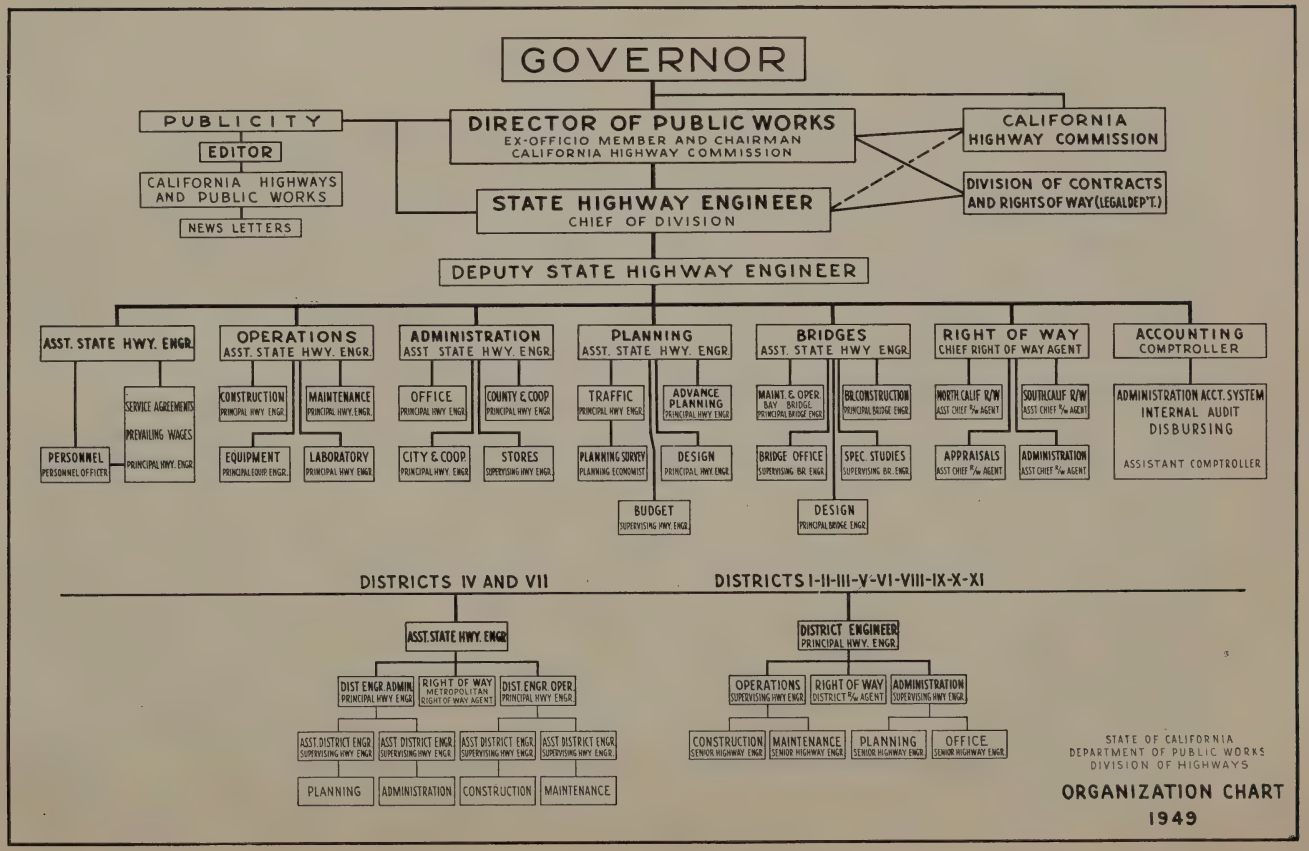
Alleviation of traffic congestion on highways in urban areas is receiving particular emphasis in state highway construction through freeway development in both the Los Angeles and San Francisco metropolitan sectors and along the heavily traveled arterials which connect these and other metropolitan areas.

The report deals in detail with the progress being made in the several phases of highway administration and in the advancement of the highway program.

Respectfully,



Director of Public Works


GOVERNOR
PUBLICITY
EDITOR
CALIFORNIA HIGHWAYS AND PUBLIC WORKS
NEWS LETTERS
DIRECTOR OF PUBLIC WORKS
EX-OFFICIO MEMBER AND CHAIRMAN CALIFORNIA HIGHWAY COMMISSION
CALIFORNIA HIGHWAY COMMISSION
STATE HIGHWAY ENGINEER
CHIEF OF DIVISION
DIVISION OF CONTRACTS AND RIGHTS OF WAY (LEGAL DEP'T.)
DEPUTY STATE HIGHWAY ENGINEER
ASST. STATE HWY. ENGR.
SERVICE AGREEMENTS
PREVAILING WAGES
PRINCIPAL HWY. ENGR.
PERSONNEL
PERSONNEL OFFICER
OPERATIONS
ASST. STATE HWY. ENGR.
CONSTRUCTION
PRINCIPAL HWY. ENGR.
MAINTENANCE
PRINCIPAL HWY. ENGR.
EQUIPMENT
PRINCIPAL EQUIP. ENGR.
LABORATORY
PRINCIPAL HWY. ENGR.
ADMINISTRATION
ASST. STATE HWY. ENGR.
OFFICE
PRINCIPAL HWY. ENGR.
COUNTY & COOP
PRINCIPAL HWY. ENGR.
CITY & COOP
PRINCIPAL HWY. ENGR.
STORES
SUPERVISING HWY. ENGR.
PLANNING
ASST. STATE HWY. ENGR.
TRAFFIC
PRINCIPAL HWY. ENGR.
ADVANCE PLANNING
PRINCIPAL HWY. ENGR.
PLANNING SURVEY
PLANNING ECONOMIST
DESIGN
PRINCIPAL HWY. ENGR.
BUDGET
SUPERVISING HWY. ENGR.
BRIDGES
ASST. STATE HWY. ENGR.
MAINT. & OPER. BAY BRIDGE
PRINCIPAL BRIDGE ENGR.
BR. CONSTRUCTION
PRINCIPAL BRIDGE ENGR.
BRIDGE OFFICE
SUPERVISING BR. ENGR.
SPEC. STUDIES
SUPERVISING BR. ENGR.
DESIGN
PRINCIPAL BRIDGE ENGR.
RIGHT OF WAY
CHIEF RIGHT OF WAY AGENT
NORTH CALIF. R/W
ASST. CHIEF R/W AGENT
SOUTH CALIF. R/W
ASST. CHIEF R/W AGENT
APPRAISALS
ASST. CHIEF R/W AGENT
ADMINISTRATION
ASST. CHIEF R/W AGENT
ACCOUNTING
COMPTROLLER
ADMINISTRATION ACCT. SYSTEM
INTERNAL AUDIT
DISBURSING
ASSISTANT COMPTROLLER
DISTRICTS IV AND VII
ASST. STATE HWY. ENGR.
DIST. ENGR. ADMIN.
PRINCIPAL HWY. ENGR.
RIGHT OF WAY METROPOLITAN
RIGHT OF WAY AGENT
DIST. ENGR. OPER.
PRINCIPAL HWY. ENGR.
ASST. DISTRICT ENGR.
SUPERVISING HWY. ENGR.
ASST. DISTRICT ENGR.
SUPERVISING HWY. ENGR.
ASST. DISTRICT ENGR.
SUPERVISING HWY. ENGR.
ASST. DISTRICT ENGR.
SUPERVISING HWY. ENGR.
PLANNING
ADMINISTRATION
CONSTRUCTION
MAINTENANCE
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DISTRICT ENGINEER
PRINCIPAL HWY. ENGR.
OPERATIONS
SUPERVISING HWY. ENGR.
RIGHT OF WAY
DISTRICT R/W AGENT
ADMINISTRATION
SUPERVISING HWY. ENGR.
CONSTRUCTION
SENIOR HIGHWAY ENGR.
MAINTENANCE
SENIOR HIGHWAY ENGR.
PLANNING
SENIOR HIGHWAY ENGR.
OFFICE
SENIOR HIGHWAY ENGR.
STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
ORGANIZATION CHART
1949

THIRD ANNUAL REPORT
BY THE
STATE HIGHWAY ENGINEER
JULY 1, 1948, TO JUNE 30, 1949

HONORABLE CHARLES H. PURCELL
Director of Public Works
State of California

SIR: June 30, 1949, marked the completion of the second year of state highway administration after enactment of the Collier-Burns Highway Act of 1947 and the first full year of operation under the complete provisions of the law.

During this last fiscal year, progress in development of the State Highway System toward elimination of critical deficiencies was continued at a level comparable to the high record which was attained during the 1947-48 Fiscal Year.

Between July 1, 1948, and June 30, 1949, the Division of Highways let to contract a total of 349 contracts, the construction value of which amounted to $68,690,000, including construction engineering, but not including right of way. Expenditures for right of way acquisition for the fiscal year totaled $31,887,000.

The total of $68,690,000 in construction contracts awarded during the year includes $59,722,400 for improvement to state highways; $8,967,600 for federal aid secondary contracts in improvement to county roads located on the Federal Aid Secondary Highway System; and $2,423,500 for maintenance contracts and miscellaneous work.

The amount of $59,722,400, representing the construction value of contracts awarded for improvement to the State Highway System, includes a total of $39,340,500 in contracts financed from the Highway Commission's budget for the 1948-49 Fiscal Year and $20,381,900 in contracts financed from the budget for the 1949-50 Fiscal Year, which latter contracts were awarded between April 1, and June 30, 1949, under that provision of the Collier-Burns Act which permits award of contracts on or after April 1st prior to the beginning of the fiscal year in which such contracts are to be financed.

The total of $68,690,000 in highway construction under the administration of the department involved improvement of 876 miles of highway and construction of 117 bridges and grade separations.

With traffic volumes still on the increase, emphasis on the alleviation of congestion in urban areas by means of freeway construction has been continued. The past year has witnessed the opening to traffic of new

Aerial View SANTA ANA FREEWAY, U. S. 101, Los Angeles,
Soto Street interchange in foreground

sections of the Bay Shore and East Shore Freeways in the San Francisco Bay area; of the Vallejo and Fairfield by-passes; of new freeway facilities at Fresno and north of Bakersfield. In the Los Angeles metropolitan area, additional portions of the Santa Ana Freeway were opened; and work on the many units of the Hollywood Freeway has advanced, with additional grade separations completed including the four-level structure which will serve as a grade separation and interchange at the intersection of the Harbor, Arroyo Seco, and Hollywood Freeways. Three large grading and paving contracts for portions of the Hollywood Freeway were started during the year.

Progress on the principal freeway development since the war is indicated by the following:

Freeway	*Number of contracts*	*Construction value* *
Bay Shore (U. S. 101 Alt.)	19	$11,594,000
East Shore (State Route 69)	16	11,825,200
San Francisco to Sacramento (U. S. 40)	36	10,520,000
San Joaquin Valley and Ridge Route (U. S. 99)	54	23,696,900
Coast Route (U. S. 101)	34	14,485,400
Hollywood Parkway (U. S. 101)	26	15,624,300
Santa Ana Freeway (U. S. 101)	20	6,942,200
Balboa Parkway (U. S. 395)	13	4,284,300

* Does not include right of way.

In addition to these larger programs, other freeway development has been carried on, notably in San Bernardino, Riverside, and Los Angeles Counties in the south and in Sacramento, Sonoma, and Santa Cruz Counties in the north.

At the present time there are 626 miles of completed freeways on the State Highway System and of these 346 miles have been completed since the war.

While freeway construction looms large in the size and cost of individual projects, the great bulk of highway contracts are for improvement to two-lane roads.

The number and value of going contracts under way at any one time provide a gauge of the volume of work of the Division of Highways. Monthly records indicate that going contracts vary from a high in the early fall to a low in February and March. Since the passage of the Collier-Burns Act work under way has ranged from highs of 283 to 290 contracts with construction values between 90 and 100 million dollars to spring lows of some 165 contracts with values around 60 million dollars.

Administrative functioning of Division of Highways' activities during the year has further substantiated the sound basis of the reorganization of 1947. Advancement of all stages of construction programs as well as general operations move steadily forward and no major changes in the organization set-up have been found necessary. Under the new organization the division is handling a construction volume which is more than twice the size of prewar programs and it seems apparent that without any change, other than expansion within the several functioning subdivisions, the department would be capable of successfully carrying on substantially larger construction programs.

BAY SHORE FREEWAY, U. S. 101 Alt., from the air near San Francisco Airport. Broadway, Burlingame, interchange in foreground

Under these conditions, it is felt that even in the face of the current great increases in population and motor vehicle registration, material progress is being made in elimination of the critical deficiencies of the State Highway System under the long range planning policies which were made possible by the Collier-Burns Highway Act. Potentialities for more rapid future progress are limited only by the revenue which may be available for state highway development.

Preparation of state highway budgets is based upon estimates of revenue from the several sources. Because of present-day fluctuations in these revenues, some difficulty is experienced in making accurate estimates upon which budgets may be prepared. This is particularly true of motor vehicle fees where the Division of Highways does not receive a definite percentage but the amount remaining after the needs of Department of Motor Vehicles and the Highway Patrol have been provided and the counties have received their fixed ratio of the total money collected.

During the year, very tangible progress was made in provision of more adequate facilities for the division by completion of the modern five-story office building for District VII in Los Angeles. A similar building for District IV in San Francisco is now under construction. It is anticipated that this new district office will be ready for occupancy in March, 1950.

On the following pages of this report will be found discussions in detail of the past year's work, under the several functions of state highway administration which verify the statements I have made relative to the over-all progress in highway development and bear out my contention of the efficient and thorough operations of the department.

Contract work awarded for the Division of Highways for the year July 1, 1948 to June 30, 1949, segregated by types and mileage, is shown in the accompanying tabulation on page 18. The tabulation on page 19 shows the total miles of the State Highway System by types and by rural and urban highways.

The tabulation of average contract prices for major items of construction over the years appears in Appendix "D" at the end of this report. Extensive studies in construction cost trends have been conducted by the department during the past year covering the period since 1940, from which have been established a tabulation of cost indices for California by years, and currently by quarters. The tabulations in Appendix "D" are correlated to the indices produced from these studies.

In the several appendices following the text of the report are given the important accounting and contract statistics.

Respectfully submitted,

G T McCoy

State Highway Engineer and
Chief of the Division of Highways

CONTRACTS AWARDED BETWEEN JULY 1, 1948, AND JUNE 30, 1949

State Highway System

Number of contracts	*Type*	*Miles*
10	Portland cement concrete	31.9
3	Asphalt concrete	1.2
82	Plant mix and road mix surfacing	388.0
9	Bituminous surface treatment	50.1
6	Seal coat	90.5
39	Grading	95.2
35	Traffic signals and lights	–
58	Bridges	–
44	Miscellaneous	–
286	Totals	656.9

Not on State Highway System
County Roads Federal Aid Secondary

17	Plant mix and road mix surfacing	87.2
4	Bituminous surface treatment	20.9
2	Seal coat	10.4
14	Grading	90.1
12	Bridges	–
5	Miscellaneous	–
54	Totals	208.6

State Institutions

1	Bridge	–
2	Bituminous surface treatment	1.5
3	Totals	1.5

State Parks

4	Bridges	–
1	Grading	0.4
5	Totals	0.4

Other Agencies

1	Bridge	–

MILEAGE BY TYPES OF STATE HIGHWAYS

(Including Totals for Urban and Rural)

June 30, 1949

Type	North			South			Totals		
	Outside cities	Inside cities	Total	Outside cities	Inside cities	Total	Outside cities	Inside cities	Grand total
Portland cement concrete	705.834	93.276	799.110	771.339	211.126	982.465	1,477.173	304.402	1,781.575
Asphalt concrete	394.189	160.655	554.844	363.509	218.425	581.934	757.698	379.080	1,136.778
Dual and combination types*	177.895	43.072	220.967	156.245	97.323	253.568	334.140	140.395	474.535
Bituminous macadam	379.333	27.575	406.908	208.487	60.678	269.165	587.820	88.253	676.073
Plant mix gravel	1,383.999	57.778	1,441.777	1,510.885	91.148	1,602.033	2,894.884	148.926	3,043.810
Road mix gravel	957.497	10.733	968.230	1,462.613	13.945	1,476.558	2,420.110	24.678	2,444.788
Oiled gravel	1,369.456	10.665	1,380.121	70.825	1.371	72.196	1,440.281	12.036	1,452.317
Gravel	10.053	0.132	10.185				10.053	0.132	10.185
Oiled earth	1,147.998	4.060	1,152.058	1,144.882	6.792	1,151.674	2,292.880	10.852	2,303.732
Earth	224.321		224.321	72.534		72.534	296.855		296.855
Bridges	60.775	11.611	72.386	30.458	6.231	36.689	91.233	17.842	109.075
No road	56.100	21.430	77.530	156.982	29.986	186.968	213.082	51.416	264.498
Totals	6,867.450	440.987	7,308.437	5,948.759	737.025	6,685.784	12,816.209	1,178.012	13,994.221

* Dual and combination types consist of two or more parallel types of surfacing.

NOTE: This table does not include non-add mileage such as outer highways, ramps, etc.

EXPRESSWAY DEVELOPMENT ON U. S. 101 South of San Luis Obispo.
Santa Lucia Range in distance

OPERATIONS

In the California state highway organization the Assistant State Highway Engineer, Operations, exercises executive authority over the functions of construction, maintenance, materials and research, and equipment. Under this general heading of "Operations" there follow reports on the work of each of these four functions for the fiscal year ending June 30, 1949.

CONSTRUCTION

In the Second Annual Report, the trend toward lower construction costs was pointed out by comparisons with the 1920 and 1924 levels. Recent statistics show that this trend still continues, due chiefly to three factors, namely: Increased labor productivity, decreased materials prices, and the assurance to the contractors of the availability of labor and materials. This trend has been reflected in a marked drop in the average contract prices since the first half of 1948 in roadway excavation, Class "B" portland cement concrete, bar reinforcing steel, and structural steel, as well as in other minor items.

The average number of bidders per project increased to 6.8 during the first half of 1949 compared to 5.1 for the last half of 1948 and for structure projects, from 5.5 to 8.6.

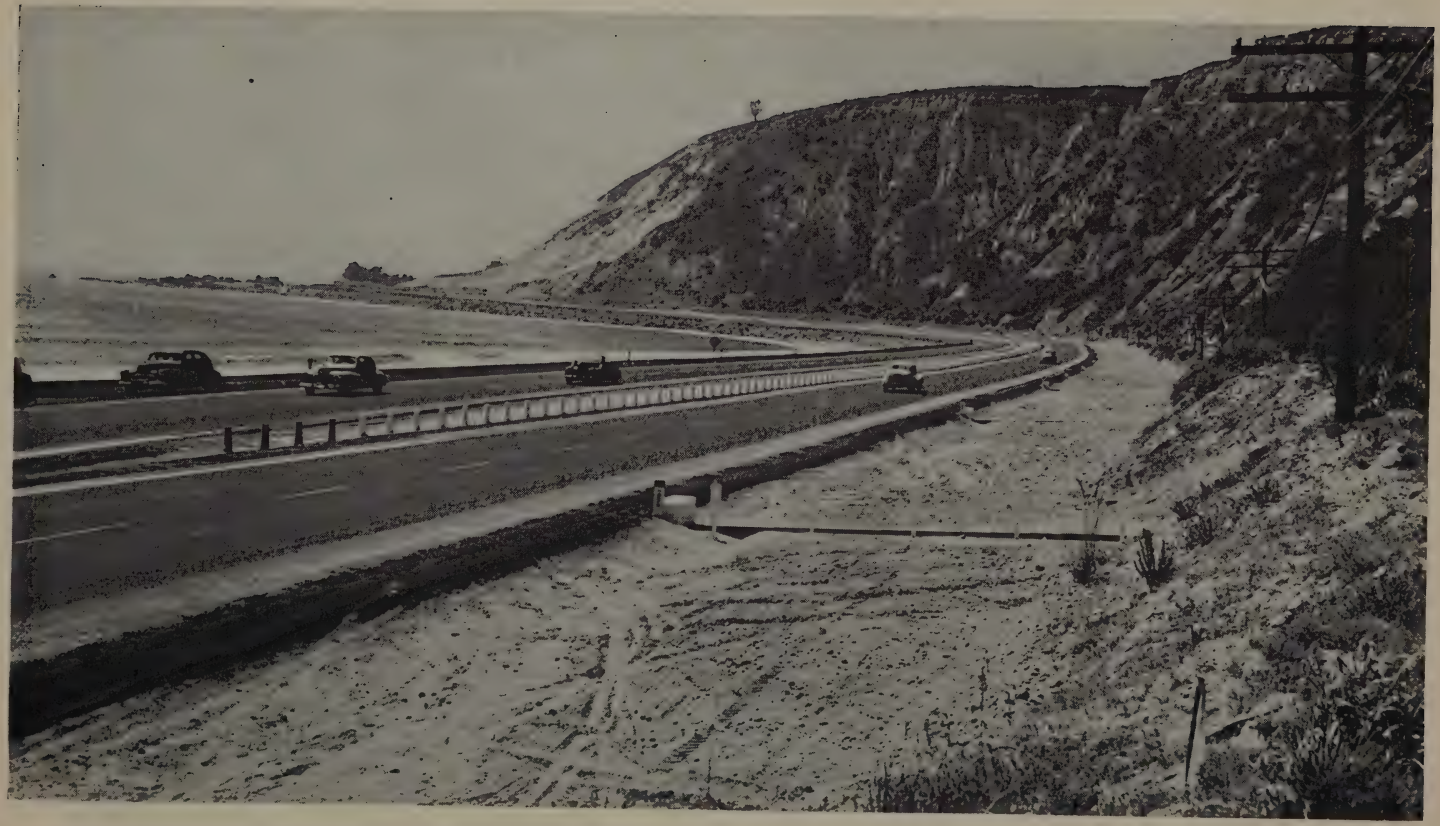
Construction Practice

Grading—There seems to be a definite trend in the selection of tractor drawn earth moving equipment by contractors toward the smaller capacity, faster units for the longer hauls. Speedier transportation calls for better maintenance of haul roads which, while adding to the cost of excavation, at the same time is a decided factor in reducing equipment maintenance costs. The former trend toward increasing the carrying capacity of the slower moving, larger units seems to be subsiding.

Many new designs of earth compacting equipment, manufactured since the end of the war, have appeared on highway construction. It has been necessary to run a great number of efficiency and capacity rating tests on this new equipment. The Materials and Research Laboratory has been called upon to conduct these investigations and it has become nearly a full-time job for one or more of their personnel.

It is gratifying to note that the average cost per cubic yard for grading during the second quarter of 1949, had dropped 23 percent from the average price during the first half of 1948.

Pavement Blankets—The reconditioning of existing pavements to hold them intact until such time as finances can be made available for their reconstruction continues to be a major construction feature. Some 239 miles were improved in this manner during the fiscal year. Much of



DEVELOPMENT OF U. S. 101 to Expressway Standards between Seacliff and Mussel Shoals in Ventura County

this mileage was in such condition that it was necessary to place a blanket of rocky material over the existing pavement before the new surface was laid in order to provide a sufficient depth of road metal to carry the loads successfully. This blanket usually consists of a six-inch depth of rocky material and, in order to provide a degree of rigidity, many of these blankets were treated with small percentages of cement. Such construction may reasonably be expected to give satisfactory performance for several years under severe traffic conditions.

Bituminous Surfaces—Plant-mixed surfacing has almost completely supplanted asphalt concrete. The decrease in cost amounts to between 20 and 25 percent and, when closely controlled, the service life of plant-mixed surfacing is nearly that of asphalt concrete.

Portland Cement Concrete Pavements—Due to weakness developing at expansion joints in concrete pavements, California entirely abandoned provision for expansion in 1946 except at bridge abutments. These pavements, after three years service, show no indication that the developed stresses have caused any serious trouble in the concrete.

The unedged weakened plane transverse joint that was adopted in 1948 has added materially to the riding qualities of this type of pavement. Recent recordings by the Bureau of Public Roads' type of trailer roughometer indicate that the more carefully finished concrete pavements of this type have a smoothness unequalled anywhere.

Project Reports, Preliminary Reports, Plans and Specifications

In order to insure uniform construction practice, all project reports, preliminary reports, plans and specifications for proposed construction on state and federal aid secondary projects are reviewed by the Construction Engineer's staff prior to advertising for bids.

The Construction Engineer works closely with the Design Engineer on structural features in order to incorporate the latest improved standards in highway foundations and pavements.

Contractors' Claims

Ten claims in connection with completed contracts were presented during this fiscal year to the Board of Review for consideration and recommendation to the State Highway Engineer. Of these 10 claims, five were settled by agreement, and five await the contractors' acceptance of the State Highway Engineer's decision. Three claims from previous years went to trial during this fiscal year, one of which was decided in favor of the State and two await the court's decision. One claim from previous years is still pending probable court action.

Prison Labor Projects

Four prison labor camps were operated continuously during the fiscal year, although work was performed on five separate projects. Camp 38 in San Diego County was moved during the latter part of 1948 to become the new Camp 40, and work was under way for a time at two locations.

The camps are as follows: Camp 36 on the Trinity Lateral in Trinity County; Camp 37 on the Angeles Crest Highway in Los Angeles County;

Camp 38 in San Diego County on the new routing of the San Diego-Riverside Highway until the completion of the work to the county line; Camp 39 in Modoc County, on the Alturas-Lakeview Highway; and the new Camp 40 in San Diego County on the San Diego-El Centro Highway near Descanso.

The completion of the work at Camp 38 in San Diego County made it possible for traffic to use 23.3 miles on new alignment between Escondido and the San Diego-Riverside county line.

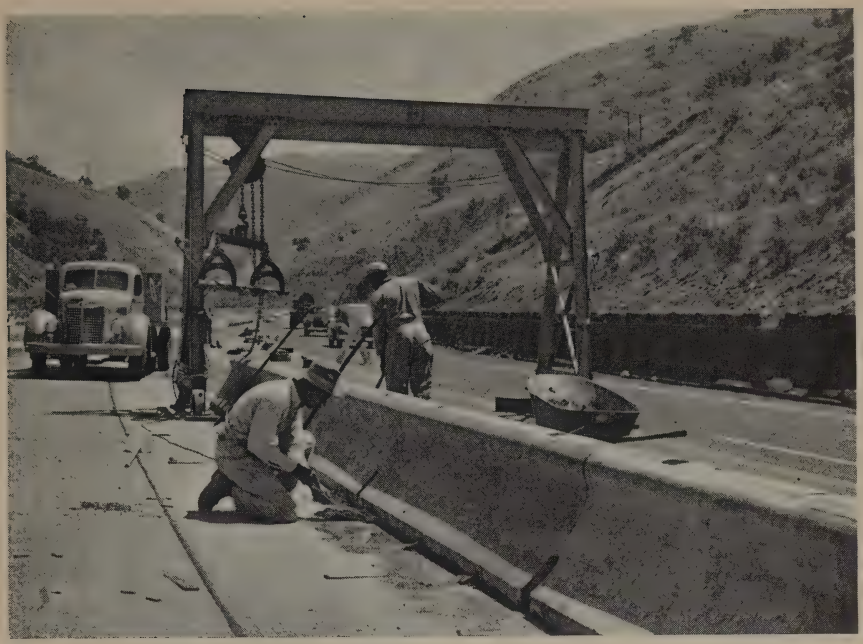
A section 2.8 miles in length between crossings of the existing road was opened to traffic in Modoc County between Willow Creek and the Oregon state line.

In Trinity County, rough grading was completed on the section between the Humboldt-Trinity county line and Cedar Flat and a light coat of liquid asphalt was placed.

The following tabulation shows camp locations and inmate quotas as of June 30, 1949:

Camp No.	*Road*	*Location*	*Inmate quota*	*Number as of June 30, 1949*
36	I-Tri-20-C,D	Burnt Ranch	50	53
37	VII-LA-61-C,D	Cedar Springs	100	99
39	II-Mod-73-A,B	Sugar Hill	50	54
40	XI-SD-12-D	Sweetwater River	85	83
		Totals	285	289

PLACING PORTLAND CEMENT preparatory to mixing cement treated base



PARABOLIC CONCRETE DEFLECTORS being placed on median strip on the Ridge Route, U. S. 99

THE OLD DAYS WERE NEVER LIKE THIS. Survey Crew setting construction stakes with pneumatic hammers

FIFTY-TON PNEUMATIC-TIRED ROLLER used on state highway construction

WAR SURPLUS SUBMARINE NET used in bank protection work

SANTA ANA FREEWAY (U. S. 101), Los Angeles. Note two-level construction

MAINTENANCE

The maintenance of California state highways has been carried on with only normal changes in policies and organization to meet conditions. Traffic volumes increased an average of about 2 percent, as compared to volumes for the previous year. There has been continuing damage to road surfaces in lumbering areas due to operation of heavy and frequently excessive weight loads. This condition was discussed at some length in the Second Annual Report. There was extensive damage to road surfaces in several sections due to frost action following the unusually cold winter, while the cost of sanding slippery pavements and snow removal was greater than in any previous winter season.

The field organization assigned to maintenance work has been increased to 2,350 men, as compared to 2,320 last year. No major additions were made to the highway system during the year, but the equivalent mileage of two-lane pavement, the number of structures, and the width of right of way to be maintained, have been increased through completion of various sections of divided highways.

The increasing traffic demands are reflected in work required on the traveled way. A larger proportion of funds available for maintenance was expended on the traveled way than in previous years. The maintenance of additional safety devices, such as traffic signals, also requires an increasing portion of the funds available.

The fourth edition of the department's "Maintenance Manual" for guidance of maintenance employees was completed during the year.

Maintenance Stations

Allocations for purchase and improvement of some 14 new maintenance station sites, as well as improvement at sites already owned, totaled some $423,000 during the year. Continued development of maintenance stations, as funds permit, is essential. Suitable working quarters for storage of equipment and materials at locations convenient to the work are necessary. Living quarters for employees are provided only at the more isolated locations where privately owned accomodations are not usually available for rent. It is of advantage to have men living close at hand when emergencies develop.

Snow Removal and Sanding Slippery Pavements

The snow removal season of the past year extended intermittently from October 29th when mountain passes were first closed, to May 28th when the Tioga Pass, the highest of the passes over the Sierra, was opened, a total of 211 days. This compares with a total of 254 days for the 1947-48 winter season. Allocations for the work totaled $1,507,392, as compared to an expenditure of $1,040,657 for the previous year. This variation in time and expenditure for the two seasons is an indication of the uncertainties connected with this special service. During the 1947-48 season, there was a period of several weeks when little work was necessary, and the expense was mainly for "standby" purposes. The 1948-49 season was exceptionally cold and the storms were widespread and so spaced that an unusual amount of overtime work was necessary. In the

CLEARING SNOW on U. S. 40 near Donner Summit

SNOW REMOVAL OPERATIONS in High Sierra

District IV area, the cost of the work was twice that for a normal year. All state highways in Lake County were closed for a short period. In the San Bernardino district it was necessary to remove snow from practically the entire highway mileage, and the snowfall was unusually heavy. It was even necessary to sand slippery pavement on the Cuesta grade in the San Luis Obispo district, where such conditions had never occurred before. The cost of sanding slippery pavement increased even over the previous year when the expense was considerable. It appears probable that the cost of this latter service may continue to be heavy each winter.

The long period of cold weather caused freezing of subgrades to an unusual degree, with great damage to road surfaces as a result. The section of U.S. 99 from Hazel Creek to Mt. Shasta, for example, was almost completely destroyed for a distance of 35 miles. The expense of restoring such sections to condition to carry traffic satisfactorily has been a heavy drain on state highway funds. In several cases, it has been necessary to program resurfacing from construction funds in order to make sure these sections will be adequate to carry traffic during the next winter season.

Major Slides and Storm Damage Repair

Allotments for removal of major slides and repair of storm damage totaled $1,153,609 for the year. This compares with an average annual

DISINTEGRATION OF SHOULDER SURFACE caused by subgrade failure

MAINTENANCE FORCES REWORK SURFACE on state highway

expenditure of $1,230,000 during the preceding five years. Road closures due to slides or flooding were at relatively few points and for short periods. The flooding occurred at such locations as the Yolo By-pass on Sign Route 24 east of Woodland, at Sloughhouse on Sign Route 16, etc. This will be a normal seasonal condition until such locations are reconstructed. There was no extensive damage to pavements or structures due to floods.

Surface Repair

The seasonal repair of traveled way and shoulders required extensive work on some 2,300 miles of traveled way and 650 miles of shoulders. This work includes penetration treatment, reprocessing, light surface blankets, and application of seal coats on pavements and shoulders. A sum of about $3,280,000 was allocated for the work throughout the 11 districts, which represents 18.4 percent of all funds available for maintenance for the year.

Bridge Repair and Maintenance

Specific allotments for bridge repair and painting totaled approximately $365,000 during the fiscal year. Work was required for repairs in excess of $300 on 452 bridges. At the end of the year there were 160 bridges posted for load limitations and 117 posted for speed limitations, a total of 277 posted bridges, as compared to 291 posted bridges on June

ROAD MIXED SURFACING PREPARED ON MIXING TABLE for use in resurfacing highway

30, 1948. Eleven bridges failed completely during the year. A main span was wrecked as a result of a heavy load on four of these 11 bridges, and two of the bridges burned as a result of a wreck involving trucks. The Maintenance Department also handled correspondence and preparation of orders in connection with posting of bridges on county roads as investigated by the Bridge Department. Two hundred forty-six county bridges were investigated.

Maintenance of State Highway in Cities

The period under review is the first full fiscal year that maintenance of state highways in the 270 cities concerned has been under the direct control of the Division of Highways, as provided in the Collier-Burns Act of 1947.

The policy of enlisting the cities' aid in carrying out the various phases of work was continued for cities properly organized to handle the work. In general, the large cities are equipped to handle the complete routine work, while in the smaller cities the assignment consists mainly of sweeping and cleaning.

On the basis of routine maintenance on traveled way only, work by city crews involved 615.40 miles, as compared to 512.28 miles where the work was performed by state forces. Expenditures by city forces totaled $1,423,388 and by state forces $1,169,495, for a combined total of

$2,592,883. A comparison of work on the basis of cost per mile, as above, is not possible as state forces carried out pavement marking, as well as other items of work which overlapped on the city maintained mileage.

The distribution of the above total by class of work is as follows:

Item	*Amount*	*Percent*
Routine maintenance of traveled way	$967,798	37.33
Structures	65,344	2.52
Safety devices	704,440	27.17
Sweeping and cleaning	575,425	22.19
Landscaped plantings	274,101	10.57
Curbs and sidewalks	5,775	0.22
	$2,592,883	100.00

Joint and Crackfilling on Concrete Pavements

The use of asphalt latex emulsion and of rubber compound crack fillers was considerably expanded during the year. Two contracts were completed, one on the freeway at North Sacramento on U. S. 40 for 4.1 miles, and one on U. S. 101 between Petaluma and Ignacio, a length of 11.2 miles. The same contractor was low bidder on both projects and the rubber compound was used. The contractor had developed special equipment for cleaning the joints, as well as for heating and applying the filler material. Every effort was made to produce a first class job. The second job extended into cold weather, as the contractor had difficulty with his equipment. The filler was pulled out by traffic on short sections. It was necessary finally to preheat the joints to insure proper adhesion. Some joints on short sections of the North Sacramento job failed during the winter, the cause of which was not definitely established. The failed joints were replaced by the contractor, and gave satisfactory service during the remainder of the winter and are satisfactory to date.

State forces filled cracks on a considerable mileage of pavement well spread throughout the State, using the asphalt latex emulsion. Equipment acquired the previous year was used to clean the joints.

The cost of the contract work averaged about 7.1 cents per linear foot of joint, including contractors' overhead. The cost of the state work averaged about 6.4 cents per linear foot. This includes actual job costs only, so it appears that the costs using either asphalt latex emulsion or rubber compound are comparable. The relatively high cost of the latex emulsion is offset by the ease of application.

Maintenance of Trees, Landscaped Areas, and Control of Roadside Vegetation

The maintenance of trees, landscaped areas, and control of roadside vegetation, required a total of nearly $755,000, as follows:

Fire hazard control, 3,810 roadside miles	$147,534
Noxious weed control	61,685
Tree maintenance	220,212
Care of landscaping	185,000
Soil sterilization	70,000
Soil erosion control	11,600
Tree removal	25,600
Brush removal (with special brush cutter)	33,600
Total	$755,231

Pavement Marking

Some 11,500 miles, or about 83 percent of the State Highway System, is traffic striped. In addition, there are numerous pavement markings, such as school zones, railroad crossings, pedestrian lanes, etc., which require regular replacement. The total cost of this type of service was about $562,000 for the year. Specifications for traffic lacquer are now substantially the same as for prewar days, as materials required are now available in sufficient quantity.

Traffic Signals

The repair and servicing of traffic signals is increasing constantly, with over 900 signalized intersections. This represents an increase of 180 intersections during the year. Special crews with equipment designed for the work are employed in the San Francisco and Los Angeles districts, where they are organized or on call on a 24-hour basis. Other districts also have men trained in this work. The signal maintenance organization in the San Francisco district also services the lighting and electrical installations in the area, including the ventilating equipment in the Broadway low level tunnel on Route 75. This work requires a crew of 15 men with a 30-foot tower truck, two ladder trucks, and two pickup trucks. The Los Angeles crew, with 500 intersections to service, consists of a 16-man crew equipped with three pickup trucks, three 14-foot ladder

LADDER TRUCK for servicing Signals and Lighting Units

trucks, a 1½-ton ladder truck, and one pickup truck with special equipment for replacing lamps. Communication in this area is facilitated with two-way radio at present, operating on the Highway Patrol frequency.

Warning and Directional Signs

The maintenance of warning, directional, and informational signs throughout the State Highway System requires the full time of 20 men equipped with 17 trucks with bodies especially constructed for this work. This crew also installs signs on new construction projects.

Materials are available in good supply and it is the practice to keep a stock on hand of signs most commonly used, so that new installations and replacements can be made with minimum delay. The cost of signing work during the year was approximately $465,000, of which about $250,000 was used on maintenance and replacement of existing signs.

Outdoor Advertising Act

The work of administration under the Outdoor Advertising Act has shown a considerable increase during the last year, as indicated by comparison of figures for the last three years, as follows:

Number of operators licensed during Fiscal Year:

1946-47	534
1947-48	780
1948-49	764

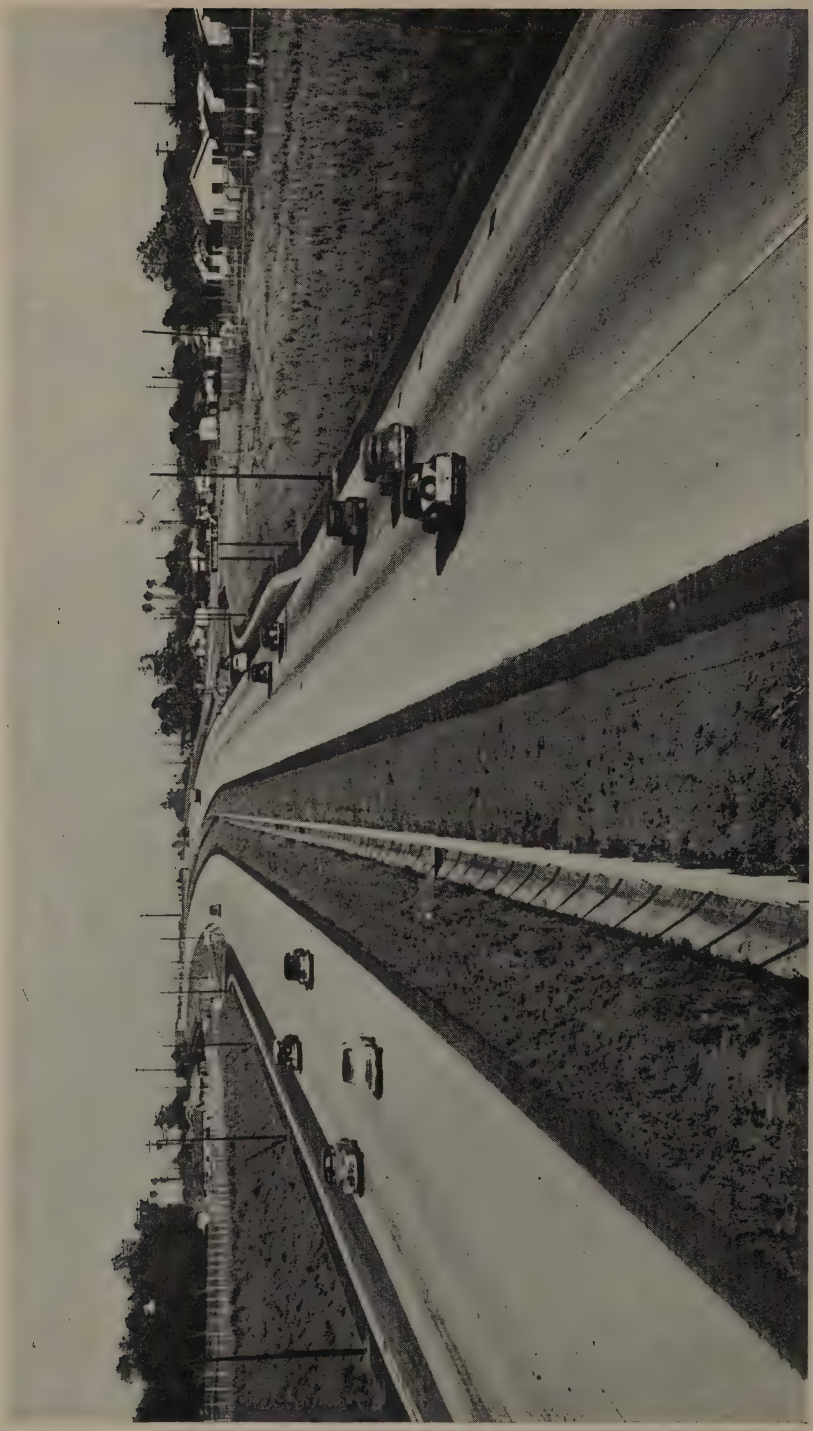
Number of permits issued and gross receipts during calendar year:

Year	*Signs*	*Structures*	*Gross receipts*
1946	731	18,793	$40,502
1947	413	21,143	52,252
1948	504	28,526	62,258

There has been no change in the policies, organization, or in the law governing administration of the act.

Radio Communication

As of June 30, 1949, this division is maintaining some 46 land radio stations, 100 mobile radio units, and four mountaintop radio repeater stations. This radio system serves parts of seven of the 11 highway districts in the State. In addition, there is a special high frequency radio system on the San Francisco-Oakland Bay Bridge. Maintenance of the radio equipment is performed by state radio technicians assigned to the various highway districts, who are responsible for the radio equipment within their respective districts. In addition, a headquarters radio shop is maintained in Sacramento, through which all radio equipment must pass before field installation. The radio equipment is fully checked and any necessary adjustments or repairs are accomplished before delivery to the field. This insures a minimum of difficulty in the installation, as well as the maximum of performance in operation. There are also maintained at the headquarters radio shop major replacement units. In the event of failure in the field, a replacement unit is dispatched, and the inoperative unit returned for repair. All normal radio maintenance, however, is accomplished in the field by the respective radio technicians.



SANTA ANA FREEWAY—U. S. 101 in Los Angeles

EXPRESSWAY WITH PROVISION IN MEDIAN for left turns

SAND SPREADER attached to dump truck

The California Division of Highways radio system increases both in value and usage each year. Highway radio during the past year played an important part in snow removal and emergency storm communications, as well as in the daily operations of the maintenance forces. This latter group encompassed such items as reporting of equipment breakdown, ordering of materials to and from job sites, transferring of equipment, direction of personnel and equipment and reassignment of field crews.

The California Division of Highways has found radio communication to be of such value that the replacement and expansion of the present system with a new high frequency FM radio system is anticipated in the near future, in conformity to Federal Communication Commission requirements.

Permits

There was no particular change during the year in policies governing the issuance of permits for movement of oversize loads or for encroachment on state highways, except that requests for encroachments on freeways are now referred to the District Utilities Engineer. The policy relating to utility installations within freeways was revised to better conform to legislation relating to such matters. A special form of utility encroachment permit is under consideration. Regulations governing the issuance of permits are detailed in the 1949 Maintenance Manual. The number of transportation permits issued during the year increased 3,259 or 14 percent over the previous year. The total of transportation and encroachment permits increased about 9 percent. The number of permits issued was as follows:

	Number of permits issued	
	Year ending June 30, 1948	*Year ending June 30, 1949*
Transportation permits	23,197	26,456
Encroachment permits	14,907	15,199
	38,104	41,655

War Damage Claims

The adjustment of claims filed under provisions of the Defense Highway Act of 1941 is still in process, with some $1,162,000 in claims outstanding. These claims cover cost of repairing damage by war-caused traffic on state highways. The status of this matter is as follows:

Total claims	$2,288,571.15
One claim rejected	72,518.48
Balance	$2,216,052.67
Claims outstanding	1,162,000.53
Claims settled	$1,054,052.14
Amount received	870,033.68
Percentage of settled claims allowed	82.54%

The amounts disallowed were either ruled by federal engineers to be betterments, or represent overhead charges not allowable under federal regulations.

MATERIALS AND RESEARCH

Work under the supervision of the Materials and Research Engineer was materially augmented during the year by an increase in the program of foundation studies, not only in connection with the state highway program but likewise in foundation borings, tests and studies for the major building program of the Division of Architecture and the continuation and expansion of the foundation boring program and soil tests for the San Francisco Bay Toll Crossings Division.

In order to properly handle the large volume of routine testing, special tests and field studies, it has been necessary to gradually enlarge

DRILL RIG for obtaining earth samples

the staff of employees operating directly under the supervision of the Materials and Research Department from 119 employees as of July 1, 1948 to 142 employees on July 1, 1949.

Aggregate, Soils and Foundation Section

Special studies conducted by the aggregate, soils and foundation section have been as follows:

(a) In collaboration with the Construction Department studies were made of the effectiveness of various types of compacting equipment on several construction projects throughout the State.

(b) Studies of the effects of admixtures of lime or of Portland cement to base and subbase materials to improve their stability and reduce plasticity and expansion.

(c) Studies of degradation of mineral aggregates in base courses to establish test procedures for predetermining the potential breakdown and subsequent instability of aggregates which otherwise conform to the normal test requirements.

(d) A series of Atterberg tests to obtain basic data for improving the specifications for the standard liquid limit device.

(e) Studies of different type soil samplers for obtaining undisturbed soil samples, and tests to determine the effects of disturbance in sampling on the strength and compressibility of the core specimens.

(f) Continued study of various modifications of the California bearing ratio test procedure to improve the correlation between test evaluations and performance of base materials in service.

Investigational Work in the Bituminous Section

Investigational work in the bituminous section has been continued principally in the development and calibration of special equipment for measuring the rate of curing or stiffening of liquid asphalt. At the same time parallel studies have been under way seeking to devise means for evaluating the durability of asphalts and means of guarding against bitmuminous pavements becoming dry and brittle at an early age.

Special studies have been conducted to develop a new extractor suitable for use in the field to analyze the composition of bituminous paving mixtures. An investigation was undertaken to determine the suitable grades and means of application of emulsified asphalt and sand as a prime coat or "base" for traffic stripes.

An analysis of the seal coat problem has been made and charts developed for the guidance of maintenance and construction engineers which should insure that seal coat construction can be carried out with greater accuracy than has been possible in the past.

A major project has been the development and standardization of test procedures and the start of routine testing employing the Stabilometer together with a new theory of design for estimating the quality and thickness of base and surface courses in pavement construction.

MATERIALS AND RESEARCH Truck-Mounted Drill Rig

Work has been under way and not yet completed seeking to develop quick and reproducible tests for use by the field engineers in order to control the qualities of subgrade and base materials during construction.

Special studies were undertaken at the request of the Bridge Engineer seeking to develop a thin durable nonskid bituminous-rubber latex mixture treatment suitable for application to metal deck plates on highway bridges.

Portland Cement Concrete

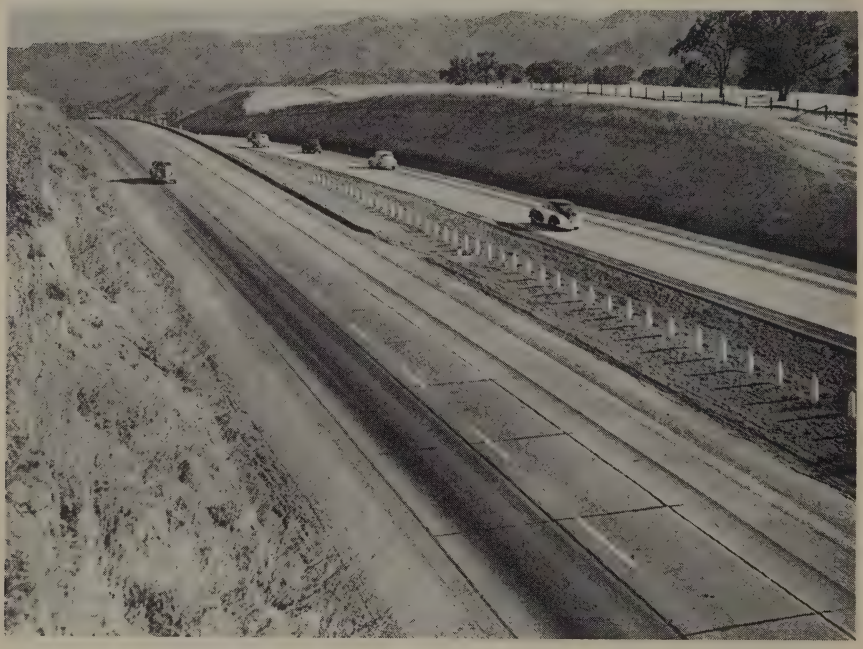
In addition to continuing and expanding the Portland Cement Association cooperative study on the long time performance of cement in concrete as well as a continuation of the reactive aggregate-high alkali cement combination problem, the major new research activity in the Portland cement concrete field consisted of the construction of the continuously reinforced one mile long test section on the Fairfield by-pass project.

The test section was completed during the year and is now under observation. As the principal early observations relate to the crack

pattern and the stresses in the steel, and as the work was constructed during the warm period of the year and therefore, the crack and stress pattern will not develop significantly until during the low temperatures of next winter, it is not expected that a report will be compiled on this project until the spring of 1950.

Miscellaneous

In addition to a continuation of the studies on all of the special test projects listed in the last report numerous special tests have been conducted (sometimes requiring the development of special test equipment and procedure) on materials, instruments, supplies and equipment purchased by the Stores Department.



EXPRESSWAY DEVELOPMENT on Ridge Route, U. S. 101, in Los Angeles County

LUBRICATING SERVICE TRUCK, assembled in Headquarters Shop

EQUIPMENT

The Equipment Department of the Division of Highways is a self-supporting unit established to supervise, maintain and account for all of the automotive, construction, and maintenance equipment owned by the division. Its chief income is derived from rental of this equipment to the other departments and districts of the Division of Highways. By this means all mechanical and motor vehicle equipment is efficiently and competently serviced and maintained, and the full proportionate cost of purchase, upkeep, and replacement of every piece of equipment of the Division of Highways is properly charged to each particular function or project on which it may be used.

Under the present organization the Equipment Engineer supervises all functions of the department and reports directly to the Assistant State Highway Engineer in charge of operations. The main shop in Sacramento handles not only the cars of the Headquarters Office, as well as some equipment for other state agencies, but also cares for cars, trucks, and maintenance equipment of the Stockton and Marysville districts. The Sacramento shop is tooled to handle construction of any special machinery for highways, such as paint striping machines, oil distributors, boring rigs, as well as special work which may be requested by other state agencies. There are ten additional shops to serve the nine districts (other than Stockton and Marysville) and the Bay Bridge, each of which

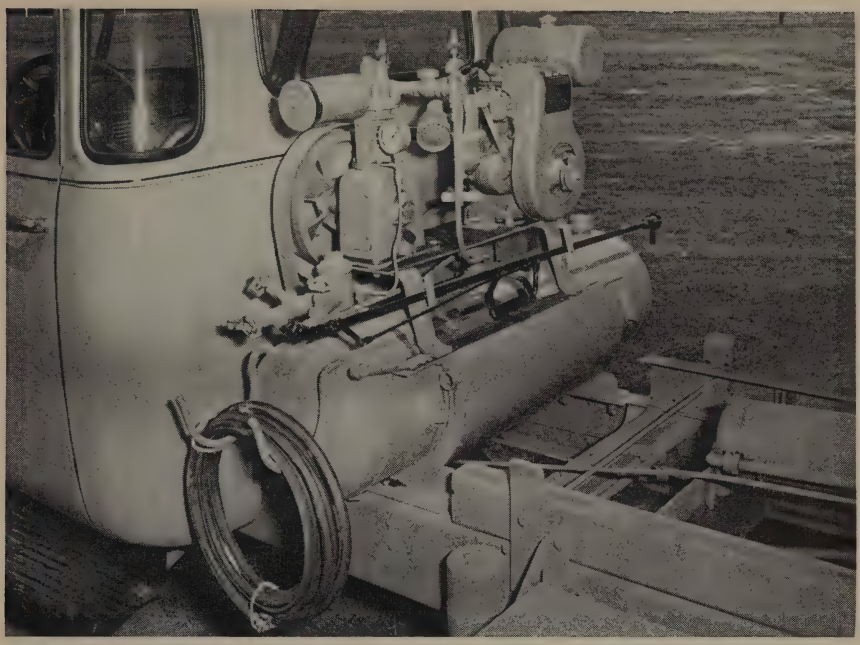
is in charge of an equipment superintendent who is responsible for the maintenance and supervision of all highway equipment in his territory and who reports to the Equipment Engineer.

A list of the buildings which, with two exceptions, includes floor space occupied by the local administrative force, the square feet of each shop, and the inventory value of equipment assigned to its care, is as follows:

Shop No.	*Location*	*Square feet covered by shop*	*Inventory value of rental equipment cared for*
Hdqrs. Shop	Sacramento	60,072	$759,995.33
1	Eureka	24,567	1,199,922.14
2	Redding	21,108	1,785,543.94
3 *	Marysville	None	1,056,715.55
4	San Francisco	18,040	1,023,239.44
5	San Luis Obispo	12,737	757,405.75
6	Fresno	16,620	1,103,425.77
7	North Hollywood	24,931	1,538,705.81
8	San Bernardino	12,321	952,884.17
9	Bishop	15,776	578,564.53
10 *	Stockton	None	1,034,934.65
11	San Diego	18,045	949,431.36
SF-Oak. Bay Bridge	Oakland	4,618	109,649.59
			$12,850,418.03

* Equipment repaired at Headquarters Shop.

BORING RIG AND MOBILE LABORATORY built for Bridge Department



EMULSIFIED ASPHALT SPRAY RIG—30-gallon tank—built in Headquarters Shop

SHOVELING APRON mounted on 1½-cubic yard dump truck

PORTION OF ARROYO SECO PARKWAY—now nine years old

The above inventory covers a total of 5,333 separate pieces of equipment. Of this number 1,035 units are passenger cars, 1,827 units are trucks of varying sizes and weights, and the remaining 2,471 units are made up of over 50 different kinds and types of construction equipment.

The large outlay for new equipment made during the past twelve months is the result of higher prices paid for the additional equipment needed for the greatly increased highway program and the replacement of old units, many of which had been kept in service far beyond their economical life because of conditions during and following the war. The increasing capital investment that is required for equipment is illustrated by power shovels that formerly cost approximately $18,000 and now cost approximately $34,000; while tractors which previously cost $4,000 now require about $7,000 to purchase. The greater part of major equipment is affected by this market condition.

The same situation also applies to upkeep and repair. The average light four-door passenger car purchased in 1939 cost $7.74 per month to repair during the first three years of its life, while the same type of car has cost $17.33 per month to repair in the period of 1946 to 1949. An effect of the increased inventory value is shown by the cost of insurance which has been $29,221.09 higher in 1949 than it was in 1948.

As a result of the foregoing, the operating costs of the department have shown a very definite increase, primarily brought about by the depreciation requirements for new equipment commissioned during this period, as well as increased proportionate rises in the cost of repair parts and labor that are reflected in operating costs. To meet this situation an extensive audit and study was begun in April of this year to analyze and evaluate the use of the various pieces of equipment and establish rental rates for them which will adequately cover the equipment's useful life, its depreciation, its repair, its rental rate, and its final salvage value. From this study of past experience on equipment which has been sold and of current costs on existing equipment, a revised rental system will be placed in effect about September 1, 1949. With this it is expected that the operations of the department will approach a balanced basis during the coming year.

During the past 12 months, equipment costing $1,363,133.45 was disposed of for $446,170.99, which amounted to 32 percent of its original value. With the return of normal market demand conditions, such a high salvage recovery cannot be reasonably anticipated on equipment now being purchased, so that the revised rental rates are being figured on the average basis of a 20 percent salvage or turn-in value. This is in accordance with the recommendation made by the Department of Finance in their "Report on Examination of the Books and Records of Account of the Division of Highways of the Department of Public Works for the period July 1, 1946, to June 30, 1948."

EXPRESSWAY DEVELOPMENT on U. S. 101 at Shell Beach, north of Pismo Beach, in Santa Barbara County

ADMINISTRATION

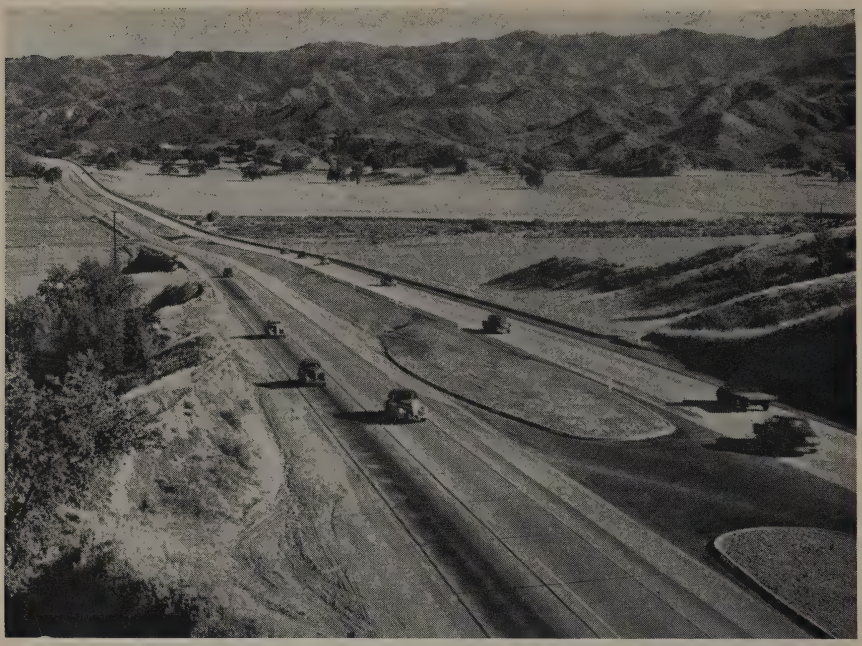
The scope of executive authority exercised by the Assistant State Highway Engineer, Administration, covers the following phases of the work of the Division of Highways: The Office Engineer's functions; county and county cooperative projects; city and city cooperative projects; and departmental stores.

The Office Engineer supervises the administration of federal aid apportionments, with the exception of federal aid secondary apportionments processed under county and county cooperative projects. Acting jointly with the Construction Engineer, the Bridge Engineer, and the Comptroller, the Office Engineer recommends the prequalification ratings for contractors who wish to bid on state highway construction. The Office Engineer also supervises engineering budget control and preparation of financial, route adoption, and freeway resolution votes for commission action; control of administrative accounts; specification preparation and final correlation of contract plans and specifications; advertising for bids, bid opening and preparation of contracts; processing of progress and final estimates on contracts; engineering review and preparation of condemnation resolutions; abandonment and relinquishment votes for action by the commission; blueprinting and reproduction for all headquarters' offices; the department's general files; compilation and analysis of construction cost data and other statistical information; preparation and publication of departmental reports, together with miscellaneous tasks necessary to the administration of the Division of Highways.

The 1949 Session of the California State Legislature continued the statutory requirement that 87½ percent of federal aid secondary apportionments be expended for improvement to county roads which are on the federal aid secondary system. As previously stated, administration of these apportionments and engineering control of the work falls under the function of county and county cooperative projects.

The city and city cooperative projects function involves administration of funds allocated to cities under the Collier-Burns Highway Act.

As an administrative function, the Stores Section formulates recommendations for purchase of supplies and equipment and is in charge of warehousing and internal distribution of such supplies and equipment, other than road equipment, for the entire Division of Highways. Expansion of the activities of the Stores Section has, however, been such that its name is no longer descriptive of its scope of operations; a title of "Services and Supplies" might be more applicable.



PORTION OF RIDGE ROUTE, U. S. 99, recently constructed to expressway standards

Construction Cost Index

Rapidly changing economic conditions since the end of the war made it necessary that some reliable method of measurement of highway construction costs be made. To accomplish this purpose the Office Engineer's section developed an index which represents the cost of doing a typical years work. In determining a typical years work, the actual quantities of eight major contract items were compiled for the year July 1, 1947 to June 30, 1948.

These quantities are as follows:

Roadway excavation	15,697,410 cubic yards
Crusher run base	681,611 tons
Plant mix surfacing	1,501,178 tons
Asphalt concrete	34,060 tons
Portland cement concrete pavement	209,157 cubic yards
Structure concrete	163,760 cubic yards
Bar reinforcing steel	27,305,435 pounds
Structural steel	36,413,500 pounds

The average contract prices paid for the above items were determined from records of bids opened each year since 1940.

The California highway construction cost index was then determined by applying the average prices to the quantities given above to determine

the cost of doing that quantity of work for the various years from 1940 to date. The year 1940 was taken as the base year and assigned a value of 100.

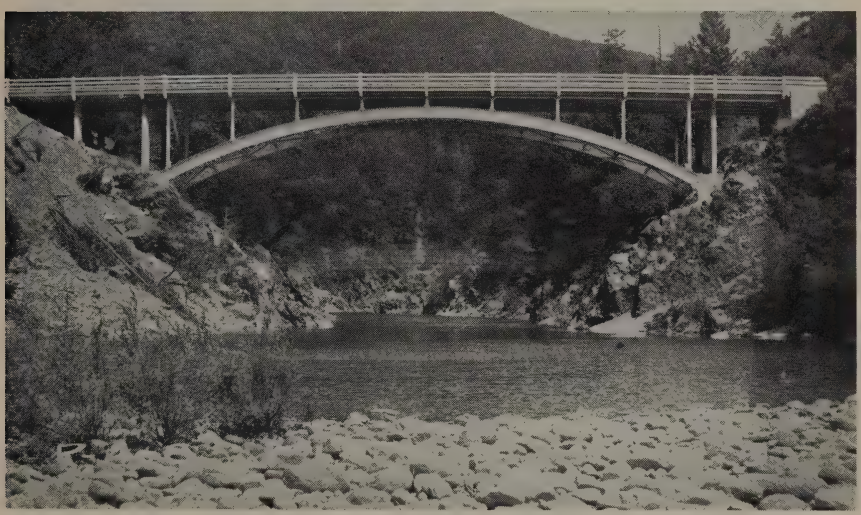
Following is a tabulation of the California highway construction cost index:

Year	*Cost Index*	*Year*	*Cost Index*
1940	100.0	1947 (1st half)	202.5
1941	125.0	1947 (2d half)	204.1
1942	157.5	1948 (1st half)	216.8
1943	156.4	1948 (2d half)	216.4
1944	177.8	1949 (1st quarter)	200.4
1945	179.5	1949 (2d quarter)	195.7
1946 (1st half)	166.1	1949 (3d quarter)	187.9
1946 (2d half)	193.2		

While the trend of costs have been downward since the first half of 1948 it is not believed that costs will decrease much further as long as labor rates are at their present high level, or as in some categories, increasing.

Prequalification of Contractors

As required by law, contractors wishing to bid on public work estimated to cost over $15,000 must be prequalified. Contractors are required

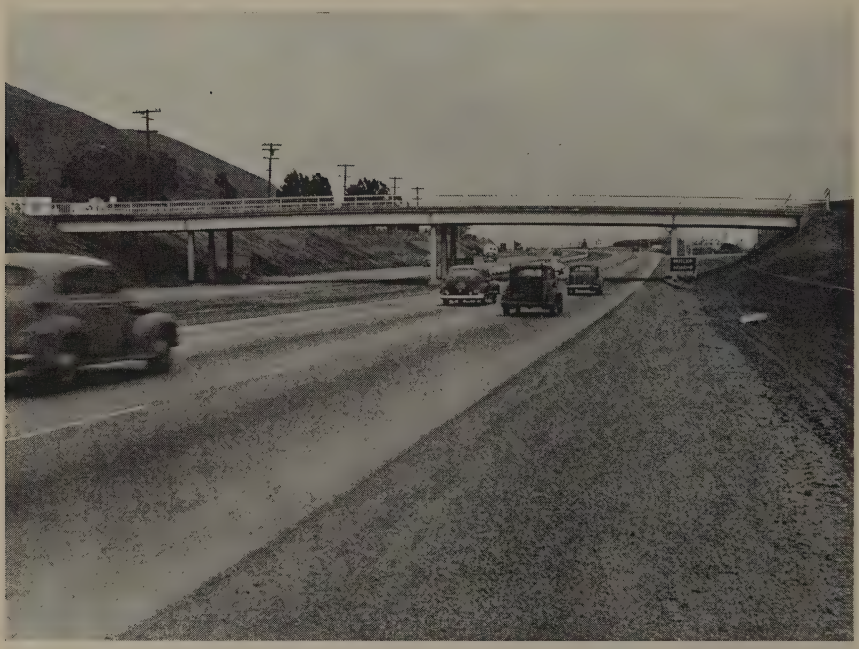


STEEL ARCH BRIDGE across South Fork of Smith River in Del Norte County, Federal Aid Secondary project

to furnish on a standard form a statement of experience and financial condition. These are reviewed, and on the basis of their finances, experience, equipment, etc., the contractors are given a definite maximum bidding capacity. Contractors are limited to a bidding capacity of not to exceed 10 times the net quick working capital or four times the total net worth, whichever is the smaller. This is the absolute maximum rating, and is further scaled down for lack of experience or equipment.

The following table shows the number of contractors prequalified by the Division of Highways on June 30, 1949:

$1,000,000 and over	158
250,000 to $1,000,000	359
125,000 to 250,000	447
50,000 to 125,000	503
Up to 50,000	639



BUTLER ROAD OVERCROSSING on Bay Shore Freeway at San Mateo

Air View of FREEWAY DEVELOPMENT on U. S. 40 at Vallejo in Solano County

Air View of EXPRESSWAY DEVELOPMENT on U. S. 40 near Fairfield showing connection to old highway leading to Fairfield (right)

FEDERAL AID

At the beginning of the 1948-49 Fiscal Year the Division of Highways was busily engaged in placing under construction as rapidly as plans and specifications could be prepared, projects designed to obligate remaining federal funds apportioned to California by the Federal Aid Highway Act of 1944.

Federal funds provided by this act for primary federal aid projects involved a total expenditure of combined state and federal funds in the estimated amount of $54,516,784. This sum was utilized for the construction of highways and bridges on the Federal Aid Highway System. The work included 95 contracts and a planning survey project. Of these contracts all but six were completed before the end of the fiscal year. These remaining six contracts, estimated to cost $5,980,000, involved federal funds in the amount of $2,931,132.

The program for the utilization of the entire amount of federal funds provided by the Federal Aid Highway Act of 1944 for improvements to the Federal Aid Highway System in urban areas included 82 contracts and a planning survey project at a total cost of $48,863,761 with federal funds amounting to $24,262,568. At the close of the fiscal year, all but seven of these contracts had been completed. The remaining seven contracts were estimated to cost $9,619,100, with the federal share amounting to $4,710,161.

The status of the program for the expenditure of federal aid for improvements on the Secondary Federal Aid System is discussed further in this report under "Federal Secondary Roads."

On September 1, 1948, California was apportioned its share of the first year's appropriation of federal aid provided by the Federal Aid Highway Act of 1948, for the fiscal year ending June 30, 1950. The amounts for the three classes of federal aid projects so apportioned are as follows:

Primary federal aid projects	$8,025,813
Urban highway projects	7,216,292
Secondary federal aid projects	4,595,138

This provides a total of $19,837,243 for the three classes of projects.

Programs designed to obligate this first year's apportionment for primary and urban federal aid projects were submitted to the Public Roads Administration. The proposed disposition of the federal funds for secondary federal aid projects is discussed further in the report under "Federal Secondary Roads."

The program for primary federal aid projects includes 21 contracts and a planning survey project with a total cost of $17,062,293. In the ten-month period between the apportionment date and the end of the fiscal year, eight contracts on this program had been placed under construction at a cost of $5,116,300, including federal funds in the amount of $2,659,800. The remaining programmed projects were scheduled for early advertisement.

The program for federal aid urban projects contains 11 proposed contracts at an estimated cost of $16,838,915, including federal funds in the amount of $7,216,292. By the end of the fiscal year work was in progress on six of these contracts at an estimated cost of $9,055,500, involving $4,503,200 of federal funds.

APPORTIONMENT OF FEDERAL FUNDS TO CALIFORNIA

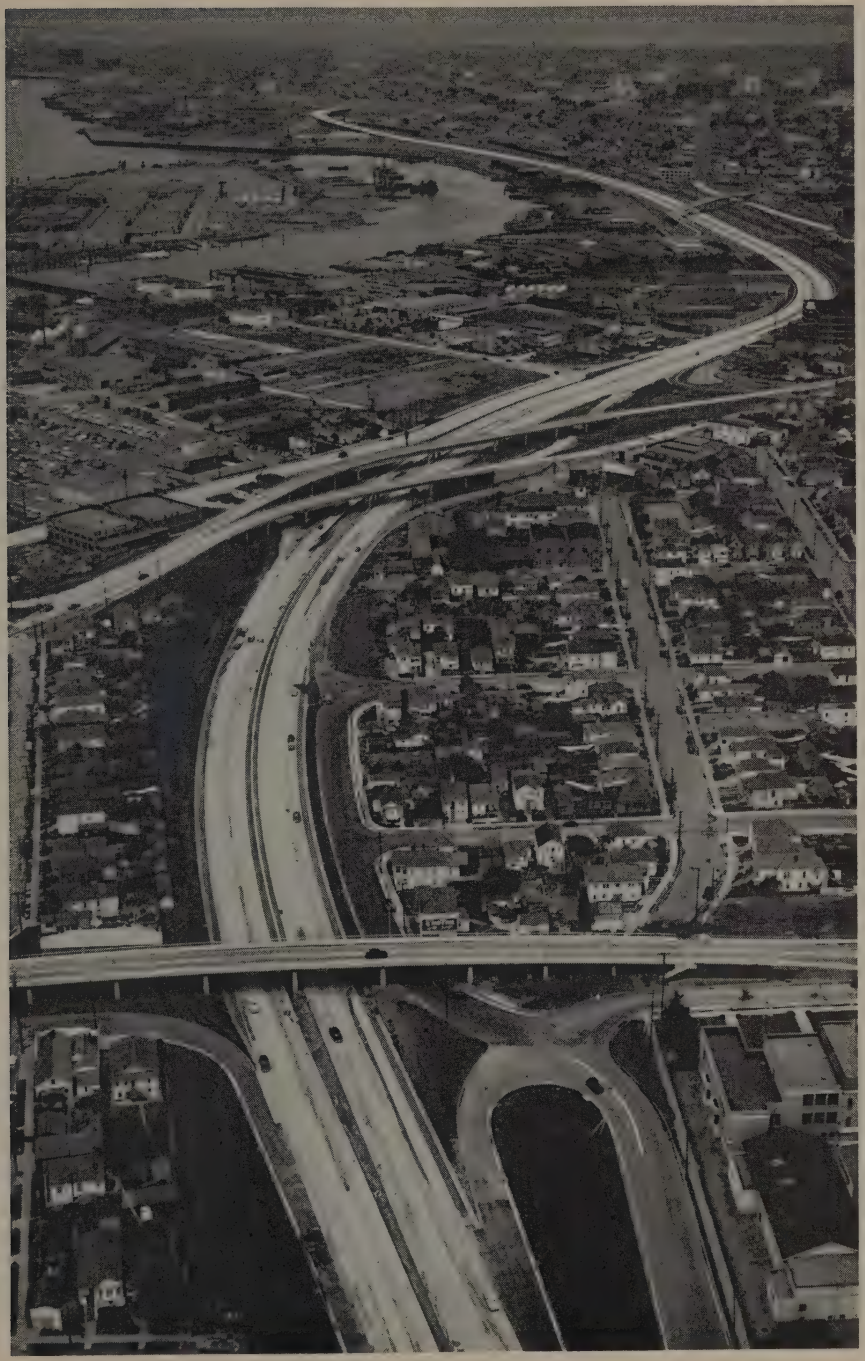
Fiscal year ending	Primary Federal Aid	Urban Federal Aid	Emergency Advance Fund	Emergency Relief and Construction Fund	U.S. Public Works Fund	1935 Public Works Highway Fund	Works Program Fund	
							Highways	Grade Crossing
June 30, 1917	$151,063 92							
June 30, 1918	302,127 84							
June 30, 1919	1,980,415 53							
June 30, 1920	2,896,071 77							
June 30, 1921	3,054,675 51							
June 30, 1922	2,462,098 53							
June 30, 1923	1,641,399 02							
June 30, 1924	2,140,463 10							
June 30, 1925	2,487,157 78							
June 30, 1926	2,472,636 00							
June 30, 1927	2,484,706 00							
June 30, 1928	2,483,437 00							
June 30, 1929	2,486,415 00							
June 30, 1930	2,495,345 00							
June 30, 1931	4,179,831 00							
August 31, 1931			$3,008,827 35					
June 30, 1932	4,181,212 00							
June 30, 1933	4,140,910 53			$4,667,188 00				
Available on and after July 1, 1933					$15,607,354 00			
June 30, 1934								
June 30, 1935						$7,932,206 00		
June 30, 1936	4,756,959 00							
June 30, 1937	4,751,712 00						$7,747,928 00	$7,486,362 00
Floods of 1937 and 1938								
June 30, 1938	4,858,220 00							
June 30, 1939	4,735,268 00							
Floods of 1940								
June 30, 1940	3,814,812 00							
June 30, 1941	4,382,966 00							
Available on and after November 19, 1941								
Available on and after December 1, 1941								
June 30, 1942	3,982,125 00							
June 30, 1943	3,989,896 00							
June 30, 1946	9,018,749 00	$8,122,233 00						
June 30, 1947	9,017,519 00	8,122,233 00						
June 30, 1948	8,897,891 00	8,018,102 00						
June 30, 1950	8,025,813 00	7,216,292 00						
Totals	$112,271,895 53	$31,478,860 00	$3,008,827 35	$4,667,188 00	$15,607,354 00	$7,932,206 00	$7,747,928 00	$7,486,362 00

APPORTIONMENT OF FEDERAL FUNDS TO CALIFORNIA—Continued

Fiscal year ending	Secondary Federal Aid	Federal Aid Grade Crossing Fund	Emergency Relief Highway Fund	Strategic Network Fund	Advance Engineering Fund	Federal Lands Fund Under State Supervision	Access Road Fund	Flight Strip Fund
June 30, 1917								
June 30, 1918								
June 30, 1919								
June 30, 1920								
June 30, 1921								
June 30, 1922								
June 30, 1923								
June 30, 1924								
June 30, 1925								
June 30, 1926								
June 30, 1927								
June 30, 1928								
June 30, 1929								
June 30, 1930								
June 30, 1931								
August 31, 1931								
June 30, 1932								
June 30, 1933						$6,841 99		
Available on and after July 1, 1933								
June 30, 1934						272,369 71		
June 30, 1935						232,478 97		
June 30, 1936						151,587 59		
June 30, 1937								
Floods of 1937 and 1938			$1,644,269 37					
June 30, 1938	$971,644 00	$1,874,656 00				36,698 89		
June 30, 1939	947,054 00	1,825,553 00				191,493 67		
Floods of 1940			315,220 63					
June 30, 1940	571,229 00	735,256 00				88,940 66		
June 30, 1941	571,992 00	1,114,363 00				95,238 00		
Available on and after November 19, 1941				$1,416,133 00			*$35,199,614 58	$2,245,325 45
Available on and after December 1, 1941				997,474 00	$398,990 00			
June 30, 1942	696,872 00	799,099 00				85,000 46		
June 30, 1943	698,232 00	798,434 00						
June 30, 1946	5,162,254 00							
June 30, 1947	5,161,445 00							
June 30, 1948	5,092,619 00							
June 30, 1950	4,595,138 00							
Totals	$24,468,479 00	$7,147,361 00	$1,959,490 00	$2,413,607 00	$398,990 00	$1,160,649 94	$35,199,614 58	$2,245,325 45
Grand total								$265,194,137 85

* Includes $182,500 of Federal Housing Authority Funds.

EAST SHORE FREEWAY IN OAKLAND looking easterly and showing city street ramps to Fifth Avenue Overcrossing in foreground



EAST SHORE FREEWAY IN OAKLAND looking westerly, 29th Avenue Overpass in foreground, 23d Avenue Overpass in middle distance

SANTA ANA FREEWAY, U. S. 101, Los Angeles, showing Lorena Avenue and Esperanza Avenue Overcrossings

FEDERAL SECONDARY ROADS

County and County Cooperative Projects

Activities of the last year relating to federal secondary roads were continued in a manner similar to that set forth in the Second Annual Report.

During the past fiscal year, federal aid secondary contracts were awarded for 50 projects, which involved the construction of 15 bridges and 207 miles of road. The cost of these projects, including engineering, was $8,864,000. Forty-two (42) road and twenty-two (22) bridge contracts were completed during the past year at a cost of $9,690,000.

There follows a tabulation of the status of federal aid secondary projects as of June 30, 1949.

County projects	*Length, miles*	*Cost*	*F. A. S. and state funds*	*Other funds*
Under contract				
22 roads	125.2	$4,942,000	$3,606,809	$1,335,191
9 bridges		2,407,155	2,193,175	213,980
	125.2	$7,349,155	$5,799,984	$1,549,171
Completed				
83 roads	452.6	$12,561,265	$11,010,214	$1,551,051
43 bridges		4,825,053	3,844,418	980,635
	452.6	$17,386,318	$14,854,632	$2,531,686
County subtotals	577.8	$24,735,473	$20,654,616	$4,080,857
State projects				
Under contract			*F. A. S. funds*	
1 road	4.3	$331,524	$56,446	$274,078
3 bridges	0.9	802,422	481,318	321,104
	5.2	$1,133,946	$538,764	$595,182
Completed				
1 road	4.3	$863,658	$476,400	$387,258
3 bridges	1.5	820,282	432,400	387,882
	5.8	$1,683,940	$908,800	$775,140
Subtotal, State	11.0	$2,817,886	$1,447,564	$1,370,322
Flashing lights				
56 installations		$245,810	$236,688	$9,142
Total	588.8	$27,799,169	$22,338,848	$5,460,321

As of the end of the fiscal year, programs have been submitted to the Bureau of Public Roads, having an estimated total cost of $35,200,000 and involving improvement to some 718 miles of road.

The Commissioner of Public Roads on September 1, 1948, apportioned the first fiscal year funds provided by the Federal Aid Highway Act of 1948. The apportionment to California for federal aid secondary projects totaled $4,595,138. On May 23, 1949, the State Senate, and on June 23, 1949, the Assembly, adopted Senate Concurrent Resolution No. 62, which authorized the allocation of 87½ percent of secondary funds

to the counties for expenditure on county roads on the federal aid secondary system. This allocation totaled $4,020,746, and was distributed among the counties on the same basis as allocated to the State, namely on the average of rural population, area, and mileage of rural post and star routes, with four counties receiving a minimum of one-half of 1 percent. No matching funds were provided for the secondary allocation, and it was stipulated that the county must provide these funds.

During the past year, minor revisions were made in the federal aid secondary system, and as of June 30, 1949, this system, as approved by the Commissioner of Public Roads, consisted of 8,985.4 miles, of which 5,287.7 miles are on county roads, and 3,697.7 miles on state highways. This represents an increase of 27.3 miles over that reported a year ago.

In compliance with the provisions of Section 2121 of the Streets and Highways Code, many of the counties of the State revised their maintained systems in May of 1949. The total increase of maintained county roads as approved by the Division of Highways was 1,245.4 miles, and on June 30, 1949, the Director of Public Works certified to the State Controller that the county maintained road system consisted of 65,826.2 miles.

The county primary road system as revised in several counties during the year and as approved June 30, 1949, consisted of 19,026.3 miles. A county is permitted to revise its mileage of primary roads from time

REINFORCED CONCRETE ARCH bridge across City Creek in San Bernardino County, located on a Federal Aid project

to time, but at no time may the mileage be in excess of 50 percent of the maintained mileage in that county.

During the past fiscal year the State offered the services of the Highway Planning Survey to the counties for the purpose of making inventories on the county road system. It was required that the county provide $2.50 per maintained mile to cover its share of the cost, it being anticipated that the balance of the cost will be paid from federal aid secondary funds set up for highway planning purposes. To date 10 counties have expressed a desire to participate in this program.

Joint Highway Districts

Under the provisions of the Joint Highway District Act, 27 joint highway districts have been organized.

Section 4 of the Collier-Burns Act of 1947 stipulates that not more than one-half of 1 percent of funds allocated to state highways in each county group (north and south) may be used for state aid in joint highway districts.

At this time, but four joint highway districts are active. The present status of these four districts is as follows:

Joint Highway District No. 9: This joint highway district was organized May 28, 1928, to provide for the improvement of the Ocean Shore Highway in Santa Cruz, San Mateo and San Francisco Counties.

REINFORCED CONCRETE GIRDER bridge across Hunter Creek in Del Norte County. Federal Aid Secondary project

APPROACHES TO NAPA RIVER BRIDGE, Federal Aid secondary project, Napa County

CROW CANYON ROAD, Federal Aid secondary project under construction, Contra Costa and Alameda Counties

3—15196

During the 1931 Session of the Legislature, this route was taken into the State Highway System as State Highway 56. During the past year, a contract covering the construction of a structure across White House Creek in San Mateo County was completed at a cost of $42,000, and a contract was awarded for the construction of a section of road between Half Moon Bay and Montara, in the same county at an estimated cost of $483,515.82, including engineering.

Joint Highway District No. 10: This district was organized September 15, 1928, to cover construction of the Junipero Serra Extension between San Francisco and Burlingame. Four units have been completed over the years. The State has been contributing an annual payment of $47,500, which represents one-third of the cost, to assist in financing the improvement. There is at the end of this fiscal year a balance of $190,000 of state funds available for use by the Joint Highway District.

The fifth unit, between Sneath Lane and Crystal Springs Road, is estimated to cost about $570,000, and since the State is contributing one-third, there should be sufficient funds to proceed with this project within the coming fiscal year.

During the year, a contract was awarded covering the installation of a traffic signal system at Junipero Serra Boulevard and School Street in Daly City, which installation was financed in part with joint highway district funds.

Joint Highway District No. 14: This joint highway district was organized December 21, 1929. At present, the district is active between Susanville and Adin, which is within the limits of FAS Route 988. There is at present a contract under way between Hayden Hill and Adin, estimated to cost $355,000, which is being financed as a joint highway district and FAS project.

During the past year, a contract was awarded covering the oiling of a portion of the route between Susanville and the North Side of Willow Creek Valley, the grading of which was completed during the previous fiscal year.

Joint Highway District No. 26: This district was organized September 26, 1938, by Alameda and Contra Costa Counties. The major part of the project is on Mountain Boulevard in the City of Oakland. Under Section 527 of the Collier-Burns Act, the route was taken into the State Highway System as State Route 227 and has since been declared a freeway by the California Highway Commission.

Preliminary engineering is being done under the supervision of the Joint Highway District Engineer.

During the past fiscal year, contracts for two projects were awarded, having a total estimated cost of approximately $86,400. The improvements consisted of the installation of drainage structures at Landvale Road northwesterly of Pinewood Road, and the construction of ramps at the Broadway Terrace Interchange. The contracts were awarded by the joint highway district.

CITY AND COOPERATIVE PROJECTS

The cities of California during the past year reached full swing in expenditure of the gas tax funds allocated under the provisions of the Collier-Burns Highway Act. This legislation enacted at the special session in 1947 became effective in stages starting July 1, 1947, becoming fully operative January 1, 1948.

Apportionments to Cities

Since cities must submit their budgets of proposed expenditures for the ensuing fiscal year on or before the first day of June in accordance with the provisions of the Streets and Highways Code, they were unable to take advantage of the increased revenue authorized by the Collier-Burns Act at the time of formulating their budgets for the 1948 Fiscal Year. Further in anticipation of enactment of legislation increasing the gas tax allocation many cities delayed the preparation of an improvement program for that year, postponing any expenditure until Fiscal Year 1949. As a result, $9,269,340.91 of the gas tax allocation to cities was unbudgeted on June 30, 1948, and was carried over for expenditure in the succeeding fiscal year.

The past year is the first full fiscal year of operation of the Collier-Burns Highway Act which increased the allocation of gas tax revenue to cities from one-fourth cent to five-eighths cent per gallon tax on gasoline. During the Fiscal Year 1949 the amount of $17,115,228.27 was apportioned to cities. Adding to this amount the $9,269,340.91 carried over from the preceding fiscal year makes a total of $26,384,569.18 available for expenditures. Of this amount the cities budgeted $22,872,837 for construction and maintenance of major city streets and secondary city streets leaving $3,511,732.18 unbudgeted to be carried over for expenditure in the Fiscal Year 1950. The increase in allocation from one-fourth cent to five-eighths cent per gallon tax on gasoline together with the normal increase in gasoline consumption resulted in an allocation to cities in the Fiscal Year 1949 nearly three times the amount allocated before enactment of the Collier-Burns Highway Act. In addition to this increase, the act gave the Division of Highways the full responsibility of maintenance of state routes in cities, thereby relieving the cities of the expense of such maintenance operations.

The allocation of one-fourth cent per gallon gas tax for expenditure on state highway routes within cities was repealed by the Collier-Burns Highway Act effective December 31, 1947. In repealing that section of the Streets and Highways Code it was stipulated that this money was to be expended for the purposes originally intended.

At the beginning of the fiscal year on July 1, 1948, the amount of $9,880,220.13 remained unexpended. During the year the amount of $4,655,557.74 was expended leaving a balance of $5,224,662.39 unexpended on June 30, 1949 to carry over into the next fiscal year. Of the $5,225,000 remaining unexpended at the close of the fiscal year, $4,445,000 or 85 percent are in the metropolitan districts of San Francisco and Los Angeles, being respectively $2,987,000 in District IV, the San Francisco area, and $1,455,000 in District VII, the Los Angeles area. Expenditures are necessarily much more difficult, and correspondingly much

slower in metropolitan areas where property values are high and where the complications of design and negotiations for the acquisition of valuable property for rights of way are time consuming.

Population in Cities

The present population of the incorporated cities of California for purposes of apportioning gas tax revenue was 6,862,293 as of June 30, 1949, as compared with a population on June 30, 1948, of 6,773,902. This represents an increase of 88,391 during the year. This increase in population is the result of annexing unincorporated territories, the population in such territories being determined by multiplying the number of registered electors residing therein by three, and by determining the increase in population of cities by a special federal census.

During the past year, 36 cities have had official counts made by the Bureau of Census, resulting in an increase in population of 67,676. Owing to the continuing rapid growth of many cities in California a number of cities during the past year had recounts made by the Federal Bureau of the Census.

Two hundred and twenty-two cities have had special counts made since the original enactment in 1943 providing for such counts. The population of these cities according to the 1940 Federal Census and including allowances for the population residing in annexed territories is 4,929,770. The aggregate increase in population since 1940 as determined by special census is 1,693,469 or an increase in these 222 cities of 34.4 percent. This increase is 25.6 percent of the total calculated urban population. The five largest cities in the State, Los Angeles, San Francisco, Oakland, San Diego and Long Beach, have a 1949 population of 3,637,789, being an increase of 828,475 or 29.4 percent. This compares with the 34.4 percent increase for all cities having a special count made. This indicates that the rate of growth in the larger cities is slower than that in the smaller cities. Those cities having the largest rate of growth are Richmond having a present population of 101,519 with an increase of 333 percent; Concord having a present population of 6,009 with an increase of 255 percent; Alameda having a present population of 89,906 with an increase of 148 percent; and Burbank having a present population of 72,588 with an increase of 111 percent.

From the above it will be seen that practically one-half the increase in population has occurred in the five largest cities in the State while the other one-half increase in population has been distributed among the other 217 cities that had a special federal census.

The act authorizing the use of a special federal census to determine the wartime population of cities was enacted in 1943 to be effective for two years. In 1945 it was extended for another two years and in 1947 it was extended to the next decennial census when it will expire.

What it has meant to the smaller cities in California to be able to secure an adjustment in the amount of the gas tax apportioned to them

can readily be appreciated. With the pressure of rapid growth in population and the need to expand and repair their street systems it was vitally important to those cities that they receive all the funds to which their population entitled them.

The legislation was originally enacted on the premise that the increased population was merely a temporary result of the demand for labor in the airplane, shipbuilding and other wartime industries established in California. The growth in population however turned out to be permanent, as is demonstrated by the fact that those cities that had a special census taken during the past year continued to show an increase in population. In some cities a recent special federal census shows an enormous increase in population over the special census of two or three years ago.

Since July 1, 1948, 101 cities have annexed 260 tracts of unincorporated territory having a population of 20,715 determined by multiplying the number of registered electors in such territories by three.

During the same period the City of Capitola having a population of 1,880 became incorporated.

MOVABLE SPAN STEEL BRIDGE across Three Mile Slough in Sacramento County. Federal Aid project

STORES—SERVICE AND SUPPLIES

The Highway Stores or Service and Supplies Department completed and put into operation two warehouses during the past year, one in Sacramento which serves the northern half of the State and one in Los Angeles serving Southern California. The Sacramento warehouse was officially opened September 8, 1948, and the Los Angeles warehouse on April 2, 1949.

The warehouses now stock 4,300 items which represent an increase of abount 1,000 new items over the preceding year. Several hundred old items were discontinued in cleaning up existing stock piles.

Following is a tabulation of the stores business for the fiscal year:

Direct purchases	$7,342,000
Warehouse purchases	1,092,800
Volume dispersed from warehouses	1,317,300

Inventory as of June 30, 1949:

137-A (district accounts)	$940,742.41
137-NS (warehouse accounts)	1,084,039.71
137-P (processing account)	87,966.09
Total	$2,112,748.21

In general, stores operates on a 10 percent markup and at the end of the first year's operation, the department showed an accumulated profit of $26,000. Profits are of secondary concern and because stores is a nonprofit organization, there is no object in building up a large surplus profit. It was therefore decided that rather than reduce the markup, it would be advantageous for stores to assume the cost of freight distribution, which procedure has resulted in eliminating a vast amount of paper work in billing, scheduling and following up in the 11 districts throughout the State.

Steel Piling

At the end of the war, the Division of Highways obtained a large supply of steel H piling for use by contractors in constructing bridges. Such steel shapes were difficult to obtain, requiring from four to nine months to effect delivery, which meant that each individual contract was delayed for delivery of materials. The purpose of the state supply of H piling was to eliminate the delay on each individual contract as the contractor could procure the piling from the State at the start of a project without waiting for delivery from Eastern mills.

In order to avoid any criticism from private enterprise in regard to state furnished materials, it was decided to lend H piling to contractors with the proviso that the piling be replaced in kind to the State within a six month's period. However, up until the present time, steel H piling has never been stockpiled in quantities on the Pacific Coast as a ready source where contractors may obtain such material. Until such private facilities are available, the state supply is in no way infringing on private enterprise.

Investigations and Studies

In addition to the routine work of procurement and warehousing, stores has continued to expand its service by undertaking several proj-

ects of an experimental nature. The division of highways uses about 300 tons of grader blades per year at a cost of about $40,000. Specifications for grader blades have been static for at least the past 20 years during which time vast strides have been made in the steel industry. Our experiments to date indicate that considerably more wear per dollar can be obtained by the use of alloy steel than was formerly possible with carbon steel and thus effect an important saving to the State.

Surveys have been conducted on the use of various hand tools and engineering supplies, such as wheelbarrows, picks, axes, rakes, sledges, bars, hoes, forks, shovels, tapes, reproduction papers, survey stakes, etc. A poll was conducted among workmen actually using the hand tools on the job and it was found that the tools most workmen desired fit the standard brands now on the market. However, in the case of the lowly shovel, of which we use about 5,000 per year, workmen expressed a unanimous desire for a shovel of a weight, size and lift not available on the market. Arrangements are being made to have the shovels manufactured to our specifications. In this regard, hand work with a shovel has changed over the years and given way to power equipment; handwork now being limited more to cleaning up than to digging.

As a result of laboratory tests, specifications for metallic tapes were formulated and vendors have indicated they will manufacture tapes to comply.

Specifications for blueprint and ammonia papers were compiled and a yearly contract for procurement set up which will result in a saving of $2,400 annually to the State.

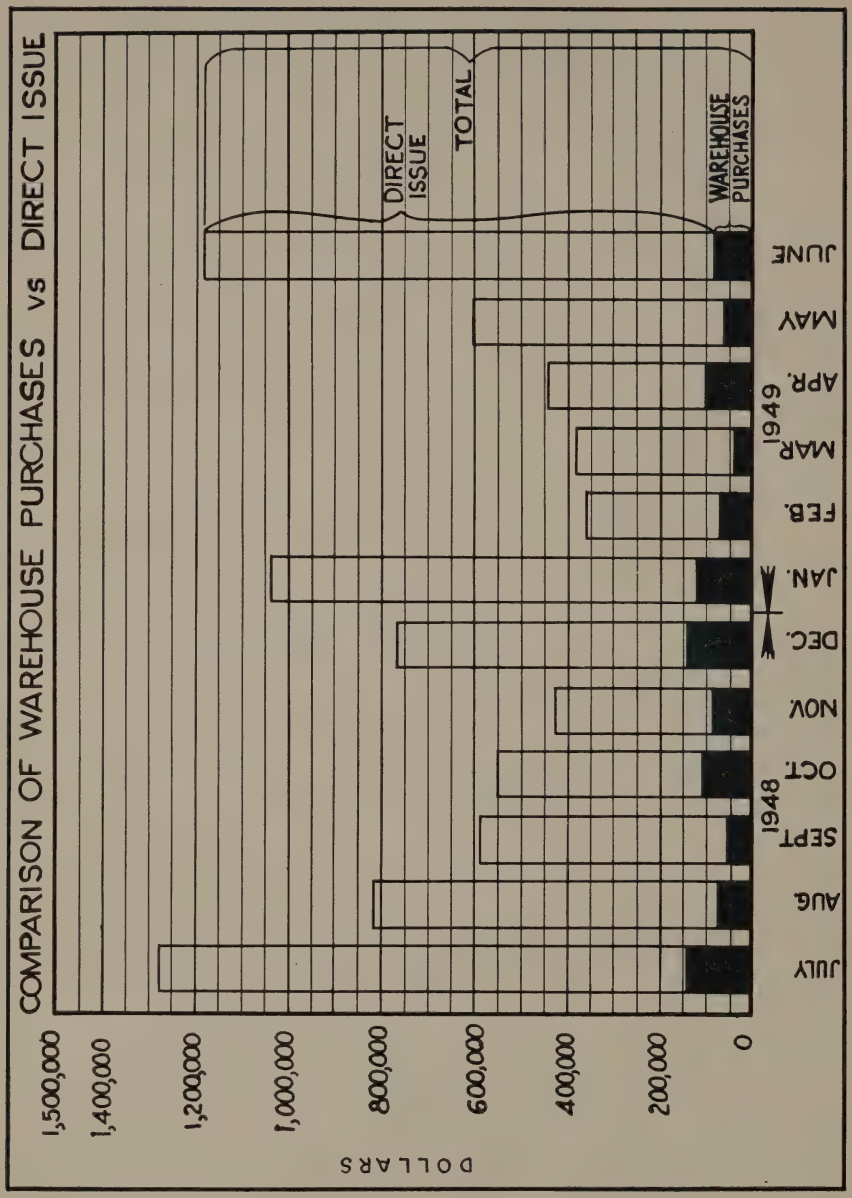
Standardization of various items used by the Division of Highways was introduced with the object of reducing the number of items stocked and elimination of overstocking items which may become obsolete. Standardization committees, representing various interested highway departments, were formed. One result of the work of these committees is that equipment has been adapted to take a standard punching for grader blades and snow plow shoes. Other items on which standardization has been accomplished or is in process include plow bolts, scarifier teeth, tire chains, broom winding, sickle bars, drill steel, heating torches, electric drills, and various roadside delineators. A redesign of the portable sign standard resulted in a saving of 50 percent in the cost of manufacture, or about $1,250 annually.

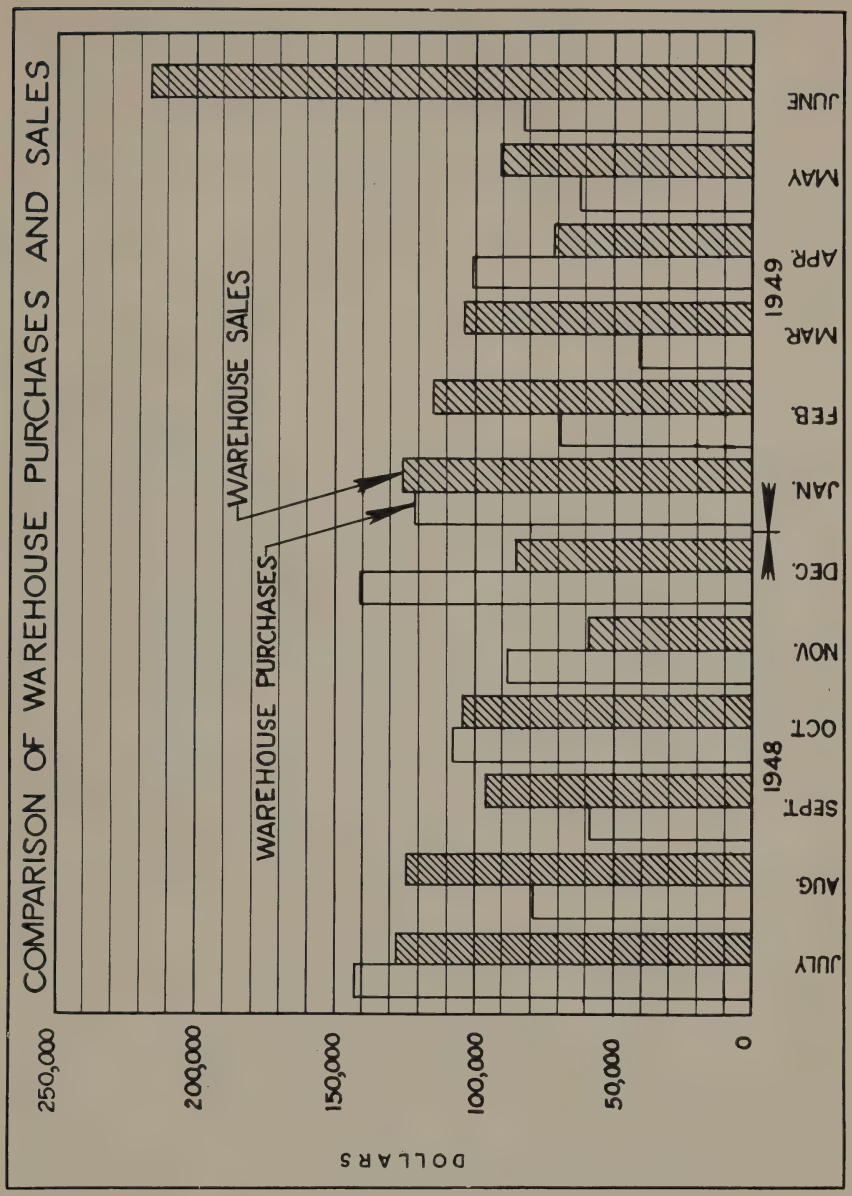
A system of inventory and charging out construction signs was introduced, which relieved a chaotic problem of long standing.

A commodity file has been set up on all items purchased in order to develop a historic record of quantities procured.

The Stores Department is primarily dedicated to service and it is therefore essential that it cooperate to the fullest extent with the districts and other departments within the highway organization. To this end, stores has two field coordinators who are in close contact with the districts and their supply problems. Their chief functions are expediting procurement and shipments, substitution when necessary, surveying materials on hand and recommending their disposition, prevention of "pack ratting" or hoarding, and introducing new methods and materials.

There follow charts which show comparisons between direct purchases and warehouse purchases and sales.


COMPARISON OF WAREHOUSE PURCHASES vs DIRECT ISSUE
DOLLARS
1,500,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
DIRECT ISSUE
TOTAL
WAREHOUSE PURCHASES
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.
JAN.
FEB.
MAR.
APR.
MAY
JUNE
1948
1949


COMPARISON OF WAREHOUSE PURCHASES AND SALES
WAREHOUSE SALES
WAREHOUSE PURCHASES
DOLLARS
250,000
200,000
150,000
100,000
50,000
0
JULY
AUG.
SEPT.
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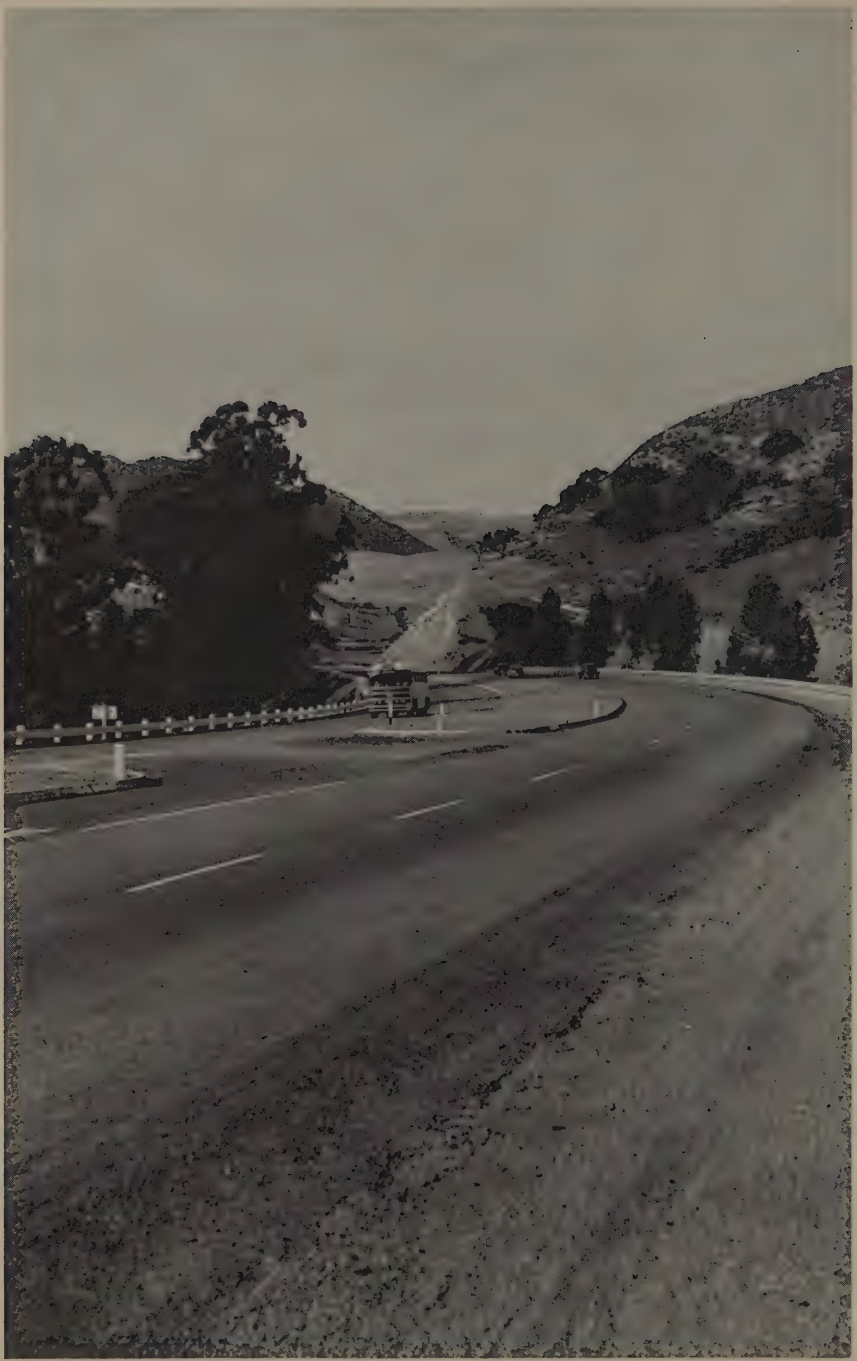
1949



FOUR-LANE DIVIDED HIGHWAY CONSTRUCTION on U. S. 101, south of San Luis Obispo

PLANNING

Acting under the direction of the Assistant State Highway Engineer, Planning, are sections covering budget, advance planning, design, traffic, and public and employee safety.

THE BUDGET

The 1948-49 Fiscal Year was the first year in which all of the revenue provisions of the Collier-Burns Highway Act were operative for the full fiscal year period. Likewise, it was the first complete fiscal year since the actual establishment of the Budget Section as such under the planning function.

Annual Budget

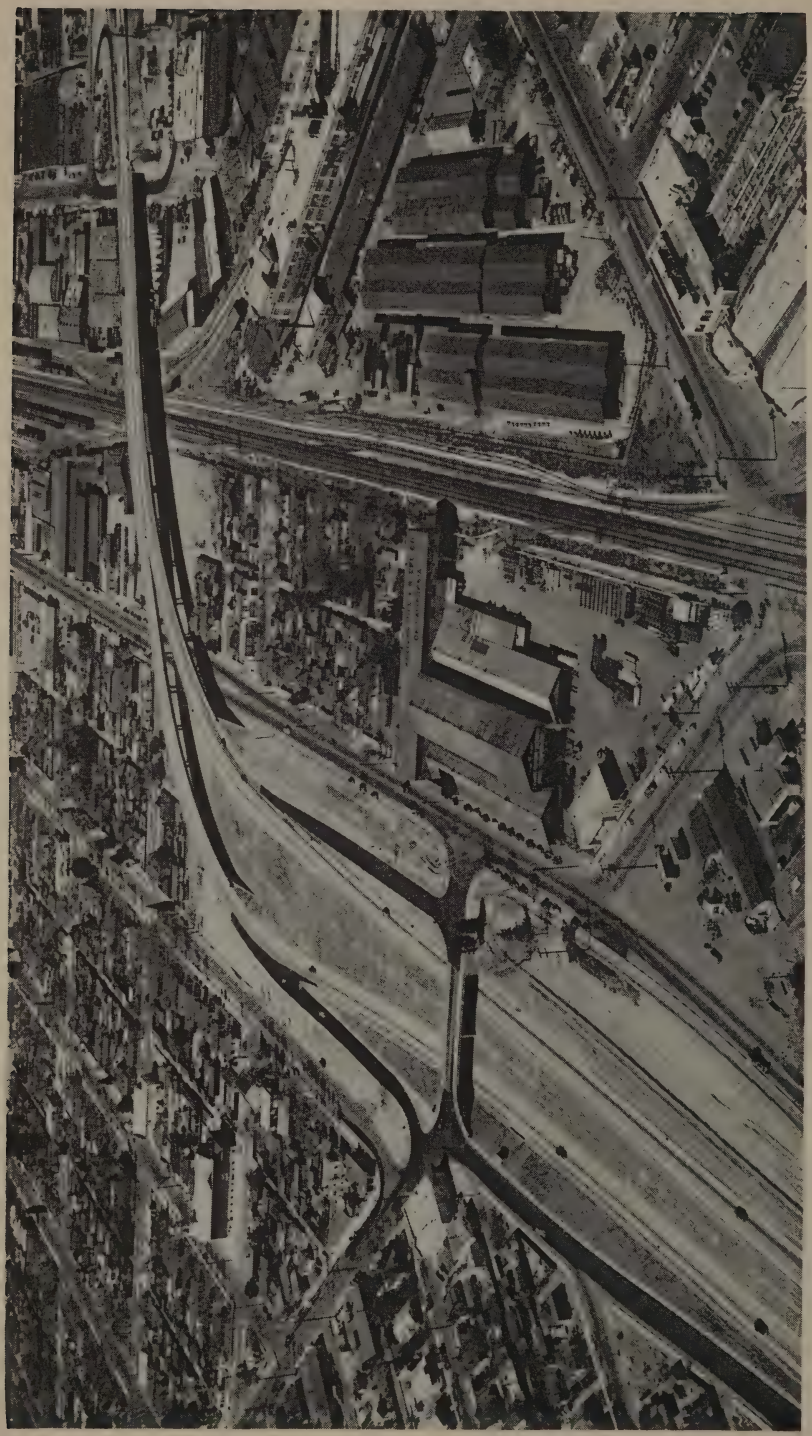
The 1948-49 Fiscal Year has been a year during which many details of procedure have required adjustment and accommodation to the overall organization, but the primary task of the Budget Section has continued unchanged: That being the preparation of the annual budget for presentation by the State Highway Engineer to the California Highway Commission for its consideration; and, when and as approved by the commission, to exercise those controls necessary to assure adherence to its provisions.

Subject, as it is, to fluctuations in current revenues which derive in the main from sources never precisely predictable, the annual budget of the Division of Highways for this one reason alone, quite aside from others equally compelling, cannot be a document once fixed unchangeable for the entire period.

Continuous Study of Traffic Trends

In order to keep aware of possible changes in expected revenue, the Budget Section maintains a continuous study of the month-to-month trends in actual highway traffic, since in large degree Division of Highways revenue is in almost direct ratio to traffic. The prevailing trends in traffic also become of vital importance in decisions regarding the allocation of available funds.

While no major changes were made during this fiscal year in either the sources or rates of revenue, Assembly Bill No. 425, which was passed by the Legislature and approved by the Governor, February 8, 1949, made an important change in the time of receipt into the State Highway Fund of moneys transferred to the Highway Users Tax Fund from the Motor Vehicle Fund. This money, which formerly was transferred annually, under the new legislation is now transferred quarterly. As a result, State Highway Fund revenues from this source for the 1948-49



FREEWAY DEVELOPMENT on U. S. 99 at Fresno. Monterey Avenue Overhead leading to Business Section in background. California Avenue Overpass in foreground

Fiscal Year were materially increased above what could normally have been anticipated at the time the budget was originally adopted by the commission. The effects of this legislation, to a lesser extent, will also reach into the 1949-50 Fiscal Year budget; but thereafter, receipts from this source will settle back to the normal annual expectancy.

Budget Preparation and Control Complicated

The preparation and control of the state highway budget has become more than ordinarily complicated by the requirement of annual budgets combined with certain changed procedures put into effect with the Collier-Burns Highway Act. Because of this, action of some nature is under way almost constantly on budgets for two fiscal years, and for a considerable portion of each year the department must deal with three budgets. A specific instance of this condition exists when during the last three months of any fiscal year, contracts are being let for projects contained in the succeeding fiscal year; at the same time the tentative budget for the second succeeding year must be in preparation for early presentation to the California Highway Commission for its consideration, review, and adoption prior to its submission to the Department of Finance for incorporation into the over-all state budget.

A further complication, and one which is very difficult to resolve satisfactorily, is the problem of estimating probable revenues from motor vehicle fees. Formerly this was not too difficult when the Division of Highways by statute received a definite percentage of these fees and could independently estimate with fair accuracy the total amount of fees which would be collected. Under present provisions of the law, the Division of Highways now receives not a definite percentage but the residue after the needs of the Motor Vehicle Department and the Highway Patrol have been provided for, and the counties have received their fixed ratio of the total money collected.

Building Program Under Budget Section

Under the direction of the Assistant State Highway Engineer (Planning), the programming of building construction to be undertaken with funds budgeted for that purpose, together with the programming of such work with the Division of Architecture and setting up of funds for the preparation of plans, specifications and construction, has been assigned to the Budget Section.

A new five-story office building for District VII in Los Angeles has recently been completed and occupied. Another modern building is rapidly nearing completion in San Francisco for District IV offices. Plans for enlargement of the District VIII office building in San Bernardino are well advanced with construction programmed for the coming year.

In cooperation with the Division of Architecture, there is now under way an over-all survey of the building needs of the Division of Highways, with particular reference to the provision of improvements and additions adequate to properly accommodate the increase in personnel in the various districts, which has resulted from the expanded highway construction program. Much of this personnel is now cared for in temporary structures or in outside rented quarters. This survey is designed to establish a basis for the orderly correction of these conditions on the basis of their importance and urgency.

BAY SHORE FREEWAY AT SAN MATEO, U. S. 101 Alt., showing Peninsular Avenue Overcrossing

DESIGN

The great importance of advance plan preparation from the design standpoint has been further emphasized during the last fiscal year under the legislative procedures of the Collier-Burns Highway Act and the system of yearly budgeting. Not only is it necessary to have plans and estimates complete to permit early advertisement and letting to contract of budgetary projects in the same year they are authorized, but it also has become apparent that the surveys and design must be an additional year in advance if delays are to be avoided due to nonacquisition of the necessary rights of way.

This results largely from the fact that under modern rights of way procedure, proper appraisals cannot be made of the rights of way required until the design details have been definitely estabished.

Advancing the planning stages of projects at least two years ahead of construction is also required by the procedure of public notification and hearings with respect to projected changes in highway routings, which policy was adopted by the California Highway Commission on July 15, 1948.

Volume of Survey and Plan Preparation

The volume of work handled by the Design Section has increased as a consequence of the effort made during the year to push the planning and design of projects further ahead in conjunction with the completion of the designs and plans for projects in the current budget.

Again acknowledgment should be made to district design organizations throughout the State. The unremitting effort of the district designing sections has been responsible for the highly successful discharge of the task of meeting project schedules. At the same time real progress has been made toward the objective of earlier survey and plan preparation.

As programs have developed, the necessity of close liaison between Headquarters Design Section and the district design organizations has increasingly become evident. Highway design is not a static science. Constant effort and study must be given to every phase and detail of design to the end that the highway will provide, through the latest in knowledge and technical findings, a safe and adequate traffic facility.

Incorporating these latest developments of design into the plans in the process of preparation throughout the eleven districts is one of the functions of the headquarters design personnel. It is their duty to contact the districts and review their projects. It also is their function to see that project schedules and budgetary limitations are being met, as well as to suggest means and methods of expediting the work.

Freeway Declarations

On July 1, 1948, the State Highway System included 1,178.9 miles of freeways which had been declared by resolutions of the California Highway Commission.

During the fiscal year July 1, 1948, to June 20, 1949, an additional 96.4 miles of state highway were declared freeways. Thus the declared freeway mileage, as of July 1, 1949, totaled 1,275.3 miles.

APPROACH TO SOUTH SAN FRANCISCO OVERHEAD on Bay Shore Freeway, U. S. 101 Alt., in San Mateo County

It should be kept in mind that this mileage is not constructed mileage but only declared mileage and that the policy of adopting freeways is primarily to control the rights of access in order to safeguard future traffic requirements.

Preliminary Engineering Authorizations

During the fiscal period July 1, 1948, to June 30, 1949, a total of 1,575 preliminary engineering authorizations were issued to the 11 districts. This is almost double the number of authorizations issued the previous year. This large increase reflects the all-out effort being made to bring surveys and plans into proper relation to advance budgetary needs.

Studies and Research

The Design Section participated in both the conception and planning of a number of experimental research projects bearing on the design function which were instituted during the 1948-49 Fiscal Year.

1. An investigation into the merits of reinforced concrete guard rail and sight posts as an alternative to the redwood posts employed heretofore.

2. A one-mile section of continuous reinforced concrete pavement was constructed as a major experiment. In this pavement the steel reinforcement is continuous and there are no joints other than those occurring at the end of the day's work. This is a study of the improvement of quality and durability, inasmuch as first cost is substantially higher than that of the conventional unreinforced concrete pavement.

3. Studies of the behavior of cement treated bases leading to improvement and more appropriate use were continued.

4. In response to a request from the subcommittee of the Standing Committee on Transportation of the State Senate, studies and analyses of the effect of heavy truck vehicles upon highway design costs were continued.

Other Agencies

The Design Section continued to act as the coordinating agency between the Division of Highways and other state agencies for which road and bridge improvements are undertaken.

Responsibility for the investigations and reports necessary in connection with proposed airport improvement projects involving the expenditure of federal moneys, with respect to their effect upon the state highways, continued to rest with this section.

Landscaping and Erosion Control

The unit of the Design Section responsible for landscaping of metropolitan freeways and erosion control on all highway projects made satisfactory progress in this phase of design during the fiscal year.

Study and experimentation was continued by this unit in a search for appropriate types of ground cover adaptable to arid California conditions.

The wide range of climatic and soil conditions encountered in California makes the selection of suitable plants and grasses for controlling erosion an extremely complex and important matter. In the rolling terrain characteristic of many of the metropolitan areas, plants must not

GRADING ROADSIDE SLOPES. Blade equipped with teeth to cut furrows for planting ground cover

only stabilize the soil effectively, but also should be attractive in appearance at all seasons. To these are added the advantages of reduction of maintenance costs and the lessening of potential hazards to the traveling public.

Modern highways require relatively large areas of land, and where the terrain is rolling, the areas increase accordingly. Every effort is made to protect the value of private property lying outside the right of way from unsightly weed growth and fire hazard.

PLANNING SECTION

A new Planning Section was added to the functions under direction of the Assistant State Highway Engineer (Planning) during the fiscal year which ended June 30, 1949. The primary function of this section is the processing of state highway projects from their inception to the design stage and the coordination of the planning work of the Division of Highways with that of other agencies.

Advance Planning Is Continuous

Planning programs are submitted by the eleven highway districts each year for the succeeding five-year periods. These programs serve not only to bring into focus projects for future budget consideration but set up an orderly and coordinated program for the development of surveys and completed plans. It is a function of the Planning Section to correlate and prepare for approval the state-wide planning program.

Project reports which are required for all projects to be considered for budgeting or for the preparation of plans are processed through the

Planning Section. An appoved project report establishes the location of the proposed improvement sufficiently for the preparation of a route adoption map and sets up the basic design features. It also includes preliminary estimate of cost and indicates the seriousness of the existing deficiency which will establish the priority of the project against others toward the acquisition of rights of way or for construction. The project reports are sufficiently complete for review by the State Highway Engineer. There were 248 project reports processed during the 1948-49 Fiscal Year.

Route adoption maps for projects which are to be declared freeways and projects where major relocation is involved are handled through the Planning Section.

Hearings on Freeway Projects

On July 15, 1948, the California Highway Commission adopted a resolution establishing a procedure for the dissemination of information and the holding of hearings on all freeway projects where location or major relocation is involved.

Upon completion of the project studies made by the district, a route adoption map is submitted to Headquarters. The State Highway Engineer then reports to and informs the Highway Commission of the location or major relocation of the freeway which he is recommending and secures from the commission authorization to give adequate public notice of the commission's intention to consider the adoption of the location. Following such authorization, letters are sent to the respective governing bodies below state level advising them of the commission's intentions relative to the section of state highway involved and requesting their advice as to the necessity or desirability of holding a public hearing. A newspaper release is also made which confirms the letters that have been given to the local governing agencies. If a hearing is requested, the State Highway Engineer arranges with the California Highway Commission for holding it. The hearings are conducted by members of the commission giving them an opportunity to hear, first hand, the reaction of the community to the proposal being presented by the State Highway Engineer. It is a function of the Planning Section to properly coordinate the action of the districts, the State Highway Engineer and the California Highway Commission in following out this adopted procedure.

Freeway Hearings Held

Public hearings have been held by the commission at Petaluma, Carpinteria and Fresno. The routes presented by the State Highway Engineer were adopted through the cities of Carpinteria and Fresno. The routing through Petaluma was not determined by the close of the fiscal year. Relocations in the vicinity of Templeton, Pittsburg and Antioch were adopted as proposed as no hearings were requested by the local governing bodies.

Coordination With Other Agencies

The Planning Section functions as the coordinating agency between the Division of Highways and many other agencies in regard to planning work formerly handled through the Design Department.

HOLLYWOOD FREEWAY IN LOS ANGELES, U. S. 101, Lankershim Boulevard Undercrossing in middle distance

Most of this activity is directly related to initial planning and budgeting procedure, such as maintaining a close association with organizations and authorities that participate in studying highway problems and in suggesting improvement programs.

Liaison between the Division of Highways and the U. S. Corps of Engineers, the U. S. Bureau of Reclamation and similar authorities relative to the effect of harbor, flood control, and reclamation work on the state highway facilities now operates under the Planning Section. The volume of this work is increasing as the federal program on flood control and water conservation gets under way. Liaison starts with the inception of the projects by the outside agencies so that the maximum in coordination of the programs of each agency may be realized. This coordinating control extends to clearing procedure through all the highway departments as well as supervising the negotiations with the outside agencies.

Many Projects Processed

During the past year numerous federal reports on these projects were processed, and important contracts for replacing state highways have been consummated. One such project is the proposed reconstruction of Route 142 in Kern County because of the proposed Isabella Reservoir on the Kern River. Another, the proposed reconstruction of Route 80 in Santa Barbara County because of the proposed Cachuma Reservoir on the Santa Ynez River. The State Water Resources Board becomes a party to any arrangements for reimbursing the Division of Highways for replacement of disturbed facilities wherever the project comes under the provisions of the Crittenden Act.

Forest Highways

Another coordinating function now under the Planning Section relates to the State's participation in the programming of the national forest highway funds and in the subsequent processing of agreements and approvals of surveys, plans, and specifications. Liaison is with the U. S. Forest Service and U. S. Bureau of Public Roads. During the past year federal appropriations of forest highway funds exceeded the allocations available during many preceding years. The work so placed under construction consisted of projects approved in the 1946-47 postwar programs and deferred until funds were appropriated. Projects undertaken included: Additional unit on the Nevada City-Downieville Highway; completion of the Harmony Ridge-Bear Valley section of the Tahoe-Ukiah Highway; reconstruction of the Tahoe City-Brockway Highway; further progress on the Forest Hill-Mosquito Ridge Timber Access Highway; improving the roadbed on the Peanut-Douglas City Road for timber hauling; a unit on the Feather Lake Forest Highway westerly of Susanville; a unit of the Sonora Pass Lateral; a unit of a route along the Sierra between Sequoia National Park and Kern River; a portion of the Mill Creek Highway relocation from Redlands to Camp Angelus; a section of relocation of the Shavers Lake-Huntington Lake road.

The status of the National Forest Highway System in California is given in the accompanying tabulations.

NATIONAL FOREST HIGHWAY SYSTEM IN CALIFORNIA, JUNE 30, 1949

No.	Name	Termini	National Forest	Length miles
		Forest Highways on State Highway System		
1	Crescent City	Forest Boundary near South Fork-Oregon Line	Siskiyou, Six Rivers	33.6
2	Klamath River	Weitchpec-Mouth of Shasta River	Klamath, Six Rivers	133.0
3	Trinity River	Junction City-Horse Summit	Trinity, Six Rivers	63.5
4	Peanut-Van Duzen	Peanut-West Forest Boundary	Trinity, Six Rivers	34.0
5	Douglas City-Peanut	Douglas City-Peanut	Trinity	30.6
6	Beegum-Peanut	Beegum-Peanut	Trinity	22.0
10	Weed-Medicine Lake	U.S. 99 near Weed-North Forest Boundary	Shasta	14.9
11	Lava Beds	Spaulding Ranch-Near Stronghold	Modoc	30.6
12	Howard Gulch	Canby-Spaulding Ranch	Modoc	17.1
13	Alturas-Cedarville	West Forest Boundary-Cedarville	Modoc	10.2
14	Redding-Alturas	Adin-Canby	Modoc	21.8
15	Redding-Alturas	SE. corner National Forest-Near Burney	Shasta	3.5
18	Red Bluff-Susanville	12 mi. W. Mineral-East Forest Boundary	Lassen	36.1
19	Red Bluff-Susanville	Near Coppervale-Susanville	Lassen	15.4
20	Almanor (Sierra Way)	Almanor Dam-F.H. 22 (Feather River)	Plumas	19.0
21	Deer Creek Meadows	Forest Ranch-Deer Creek Meadows	Lassen	38.0
22	North Fork Feather River	Forest Boundary-Quincy	Plumas	53.4
23	Quincy-Beckwith	Quincy-Beckwith	Plumas	38.3
25	Nevada City-Downieville	North San Juan-Downieville	Tahoe	33.0
26	Yuba Pass	Downieville-Sattley	Tahoe	31.2
27	Sierraville-Hobart	Randolph-1.7 mi. S. of Sierra-Nevada Co. Line	Tahoe	15.8
28	Calpine-Clio	Calpine-Mohawk Valley	Tahoe-Plumas	7.2
29	Emigrant Gap	Near Blue Canyon-Union Mills	Tahoe	38.7
30	Truckee-Meyers	Truckee Junction-U.S. Rte. No. 50	El Dorado	42.4
31	Tahoe-Brockway	Tahoe City-Nevada Line	Tahoe	11.4
32	Placerville-Lake Tahoe	Pollock Pines-Nevada Line	El Dorado	46.8
33	Carson Pass	Cook Station-Willow Creek	El Dorado	42.5
34	Woodfords-Minden	Woodfords-Nevada Line	Toiyabe	6.0
35	Ebbetts Pass	Murphy-Woodfords	Stanislaus-Toiyabe	77.0
36	Topaz	2 mi. S. of Coleville-Nevada Line	Toiyabe	11.3
37	Bridgeport-Coleville	Bridgeport-2 mi. S. of Coleville	Toiyabe	30.1
38	Sonora Pass	Soulsbyville Junction-U.S. Rte. No. 395	Stanislaus-Toiyabe	66.4
39	Big Oak Flat (Tioga)	Big Oak Flat-Yosemite Park Boundary	Stanislaus	32.0
40	Tioga	F.H. 41 (U.S. Rte. 395)-Yosemite N.P. Boundary	Inyo	15.3
41	Red Rock-Bridgeport	Near Convict Creek-Mono Lake	Inyo	34.9
42	Red Rock-Bridgeport	Approx. 5 mi. N. Inyo-Mono Co. Line-Approx. 1 mi. W. Rock Creek Inn	Inyo	7.0
43	Luther Pass	Woodfords-U.S. Rte. 50 near Meyers	Toiyabe-El Dorado	17.8
45	Mariposa-El Portal	Briceburg-Yosemite Park Boundary	Sierra-Stanislaus	17.8
46	Harmony Ridge	West Forest Boundary-U.S. Rte. 40	Tahoe	16.7
47	Oakhurst	Yosemite Park Boundary-Oakhurst	Sierra	14.8
48	Huntington Lake	West Forest Boundary-Huntington Lake	Sierra	40.0
49	Kings Canyon	N.P. Boundary-Deer Cove Creek	Sequoia	24.6
50	Fresno-Kings Canyon	Approx. 5 mi. W. of Deer Park-N.P. Boundary	Sequoia	12.9
51	Hoopa	Willow Creek Junction-Hoopa Indian Reservation	Six Rivers	8.7
52	Glenville-Kernville	West Forest Boundary-East Forest Boundary	Sequoia	10.0
53	Bakersfield-Freeman	Cottonwood Creek-Bodfish	Sequoia	30.1
54	Cuyama	Dutard Ranch-Cuyama River Bridge	Los Padres	15.4
55	Cuesta Pass	Cuesta-San Luis Obispo Creek	Los Padres	3.6
56	San Marcos	Santa Ynez River Bridge-South Forest Boundary	Los Padres	22.8
57	Ridge Route	Castaic-Gorman	Angeles-Los Padres	26.9
58	Arroyo Seco	La Canada-Red Box	Angeles	13.1
61	Angeles Crest	Red Box-Islip Saddle	Angeles	30.0
62	San Gabriel	South Forest Boundary-Islip Saddle	Angeles	32.0
63	Swartout	Islip Saddle-Highway near Phelan	Angeles-San Bernardino	24.0
64	Cajon	Devore-Near Summit	San Bernardino	14.8
65	Bear Valley	Forest Boundary near Arrowhead Sprgs-Pine Knot	San Bernardino	40.3
66	Fawnskin	F.H. 65-Sylvan Way via Fawnskin	San Bernardino	11.0
67	San Luis Rey	East Forest Boundary-West Forest Boundary	Cleveland	4.0
68	Mill Creek	Pine Knot-South Forest Boundary	San Bernardino	40.0
70	Idyllwild-Desert	Keen Camp-Coachella Valley	San Bernardino	37.1
71	Mt. Lassen	SW. Boundary Lassen National Park-Mineral	Lassen	8.8

NATIONAL FOREST HIGHWAY SYSTEM IN CALIFORNIA, JUNE 30, 1949—Continued

No.	Name	Termini	National Forest	Length miles
		Forest Highways on State Highway System—Continued		
72	Idyllwild	San Jacinto Ranger Station-Keen Camp	San Bernardino	10.0
75	Manzanita Lake	Lassen N.P. Boundary-1 mi. W. of Forest Bdry.	Lassen	4.5
76	Maricopa-Ventura	North Forest Boundary-South Forest Boundary	Los Padres	43.4
77	Mt. Shasta-Mt. Lassen	Mt. Shasta City-NW. Boundary Lassen N.P.	Shasta-Lassen	91.3
79	Morgan Summit-Morgan Springs	Morgan Summit-Morgan Springs	Lassen	3.8
80	El Cajon-Jucumba	Alpine-La Posta Ranch	Cleveland	27.8
81	Mammoth Lakes	U.S. Rte. 395-McLeod Lake	Inyo	10.7
82	June Lake	U.S. Rte. 395-U.S. Rte. 395 via Silver Lake	Inyo	15.0
84	Morro Bay	East Forest Boundary-West Forest Boundary	Los Padres	3.6
91	Bishop Creek	East Forest Boundary-Sabrina Lake	Inyo	11.0
94	East Walker River	South Forest Boundary-Nevada Line	Toiyabe	8.5
		Forest Highways Not on State Highway System		
7	Mendocino Pass	Williams Creek-Mouth of Grindstone	Mendocino	54.0
8	Lucerne Bartlett	Lucerne Junction-Hough Springs	Mendocino	22.7
16	Willow Creek	Adin-Grasshopper Valley	Modoc	30.0
17	Westwood	State Highway No. 29-Forest Highway No. 92	Lassen	18.0
24	Gold Lake	Graeagle-Yuba Pass Junction	Plumas	15.0
44	Aspen Valley	Big Oak Flat Highway-Boundary Yosemite N.P.	Stanislaus	2.0
59	Vincent	Vincent-Barley Flat	Angeles	25.0
60	Mt. Wilson	Red Box-Mt. Wilson	Angeles	5.0
72	Idyllwild	Keen Camp-Idyllwild	San Bernardino	5.5
73	Laguna	Laguna Junction-Cuyamaca Lake	Cleveland	25.4
74	North Fork	Oakhurst Junction-F.H. 48	Sierra	26.5
78	Generals Highway	Sequoia Park-General Grant Grove Kings Canyon N.P.	Sequoia	10.4
83	Pine Crest	F.H. 38 (Sonora Pass)-Pine Crest	Stanislaus	0.9
85	Round Lake	U.S. Rte. 50-F.H. 33 (Carson Pass)	El Dorado	11.0
86	Blue Lakes	F.H. 33 (Carson Pass)-F.H. 35 (Ebbetts Pass)	El Dorado-Mono-Stanislaus	18.0
87	Clarks Fork	F.H. 35 (Ebbetts Pass)-F.H. 38 (Sonora Pass)	Stanislaus	21.0
88	Clavey River	F.H. 38 (Sonora Pass)-F.H. 39 (Big Oak Flat)	Stanislaus	30.0
89	Rock Creek	U.S. 395-Rock Creek Lake	Inyo	12.0
90	Western Divide	F.H. 52-Quaking Aspen Meadows	Sequoia	39.0
92	Feather Lake	F.H. 77 (Mt. Shasta-Mt. Lassen Hwy.)-State Rte. 29	Lassen	49.0
93	Salmon River	Somes Bar-Sawyers Bar	Klamath	34.0
95	Mt. Pinos	U.S. Rte. 99-Bitter Creek Saddle	Los Padres	21.3
96	Mosquito Ridge	Foresthill-Beartrap Saddle	Tahoe	19.2
97	Herring Creek	F.H. 38 (Sonora Pass Hwy.)-Herring Creek Camp	Stanislaus	9.5
98	Everitt Memorial Hwy.	Mt. Shasta City-Panther Meadow	Shasta	14.8

Forest Highways on the State Highway System	1,910.8 miles
Forest Highways not on the State Highway System	519.2 miles
California Forest Highway System	2,430.0 miles

CONSTRUCTION AND EXPENDITURES BY THE PUBLIC ROADS ADMINISTRATION ON FOREST HIGHWAY SYSTEM, STATE OF CALIFORNIA UP TO AND INCLUDING FISCAL YEAR ENDING JUNE 30, 1949

Designation					Status as of June 30, 1949				
Rte. No.	Name of route	Termini of projects	County	National forest	Total length of route, miles	Miles built or under construction	Total expenditures	Federal funds	Cooperative funds
1	Crescent City (U.S. 199)	Forest Boundary near South Fork-Oregon Line	Del Norte	Siskiyou, Six Rivers	33.6	26.7	$1,478,904	$695,925	$782,979
2	Klamath River	Weitchpec-Mouth of Shasta River	Humboldt-Siskiyou	Klamath, Six Rivers	133.0	49.7	1,274,753	1,176,191	98,562
3	Trinity River (U.S. 299)	Junction City-Horse Summit	Trinity-Humboldt	Trinity, Six Rivers	63.5	4.8	129,884	129,884	
5	Douglas City-Peanut	Douglas City-Peanut	Trinity	Trinity	30.6	19.8	463,731	463,731	
7	Mendocino Pass	Williams Creek-Mouth of Grindstone	Mendocino-Glenn	Mendocino	54.0	54.0	451,365	416,365	35,000
8	Lucerne-Bartlett	Lucerne Junction-Hough Springs	Lake	Mendocino	22.7	22.7	54,560	47,341	7,219
10	Weed-Medicine Lake (U.S. 97)	U.S. 99 near Weed-North Forest Boundary	Siskiyou	Shasta	14.9	9.9	99,003	99,003	
11	Lava Beds	Spaulding Ranch-Near Stronghold	Modoc	Modoc	30.6	30.6	703,199	703,199	
12	Howard Gulch	Canby-Spaulding Ranch	Modoc	Modoc	17.1	17.1	494,175	484,995	9,180
13	Alturas-Cedarville	West Forest Boundary-Cedarville	Modoc	Modoc	10.2	7.7	117,776	58,888	58,888
14	Redding-Alturas (U.S. 299)	Adin-Canby	Modoc	Modoc	21.8	10.9	214,537	214,537	
18	Red Bluff-Susanville	12 mi. W. of Mineral-East Forest Boundary	Tehama-Plumas	Lassen	36.1	24.3	527,634	350,634	177,000
20	Almanor (Sierra Way)	Almanor Dam-F.H. 22 (Feather River)	Plumas	Plumas	19.0	20.8	1,106,877	1,106,877	
21	Deer Creek Meadows	Forest Ranch-Deer Creek Meadows	Butte-Tehama	Lassen	38.0	25.9	912,189	821,548	90,641
22	North Fork Feather River	Forest Boundary-Quincy	Butte-Plumas	Plumas	53.4	5.7	200,700	200,700	
23	Quincy-Beckwourth	Quincy-Beckwourth	Plumas	Plumas	38.3	38.3	805,271	551,649	253,622
25	Nevada City-Downieville	North San Juan-Downieville	Nevada-Yuba-Sierra	Tahoe	33.0	6.6	935,001	933,501	1,500
26	Yuba Pass	Downieville-Sattley	Sierra	Tahoe	31.2	31.2	740,453	740,453	
27	Sierraville-Hobart	Randolph-1.7 mi. S. Sierra-Nevada Co. Line	Sierra-Nevada	Tahoe	15.8	15.8	478,286	476,129	2,157
28	Calpine-Clio	Calpine-Mohawk Valley	Sierra-Plumas	Tahoe-Plumas	7.2	7.2	212,544	212,544	
29	Emigrant Gap (U.S. 40)	Near Blue Canyon-Union Mills	Nevada-Placer	Tahoe	38.7	6.9	246,826	246,826	
30	Truckee-Meyers	Truckee Junction-U.S. Rte. 50	Nevada-Placer-El Dorado	El Dorado	42.4	14.5	494,732	457,303	37,429
31	Tahoe-Brockway	Tahoe City-Nevada Line	Placer	Tahoe	11.4				
32	Placerville-Lake Tahoe	Pollock Pines-Nevada Line	El Dorado	El Dorado	46.8	37.1	2,655,805	2,343,101	312,704
35	Ebbetts Pass	Murphy-Woodfords	Calaveras-Alpine	Stanislaus-Toiyabe	77.0	18.1	362,796	215,586	147,210

36	Topaz (U.S. 395)	2 mi. S. Coleville-Nevada Line	Mono	Toiyabe	11.3	11.3	215,037	214,237	800
38	Sonora Pass	Soulsbyville Junction-U.S. Rte. 395	Tuolumne-Mono	Stanislaus-Toiyabe	66.4	29.7	884,514	766,272	118,242
47	Oakhurst	Yosemite National Park Boundary-Oakhurst	Mariposa-Madera	Sierra	14.8	14.8	591,435	591,435	
48	Huntington Lake	West Forest Boundary-Huntington Lake	Fresno	Sierra	40.0	3.9	43,729	22,225	21,504
50	Fresno-Kings Canyon	Approx. 5 mi. W. of Deer Park-National Park Boundary	Fresno-Tulare	Sequoia	12.9	1.6	202,025	202,025	
51	Hoopa	Willow Creek Junction-Hoopa Indian Reservation	Humboldt	Six Rivers	8.7	8.7	274,610	274,610	
54	Cuyama	Dutard Ranch-Cuyama River Bridge	Santa Barbara	Los Padres	15.4	15.4	651,792	312,927	338,865
56	San Marcos	Santa Ynez River Bridge-South Forest Boundary	Santa Barbara	Los Padres	22.8	16.4	392,553	211,791	180,762
60	Mt. Wilson	Red Box-Mt. Wilson	Los Angeles	Angeles	5.0	5.0	185,213	185,213	
61	Angeles Crest	Red Box-Islip Saddle	Los Angeles	Angeles	30.0	13.4	887,571	879,277	8,294
62	San Gabriel	South Forest Boundary-Islip Saddle	Los Angeles	Angeles	32.0	9.4	1,450,820	278,676	1,172,144
63	Swartout	Islip Saddle-Highway near Phelan	Los Angeles-San Bernardino	Angeles-San Bernardino	24.0	7.7	270,681	270,681	
65	Bear Valley	Forest Boundary near Arrowhead Springs-Pine Knot	San Bernardino	San Bernardino	40.3	20.8	1,302,041	690,220	611,821
68	Mill Creek	Pine Knot-South Forest Boundary	San Bernardino	San Bernardino	40.0	3.2	252,167	252,167	
70	Idyllwild-Desert	Keen Camp-Coachella Valley	Riverside	San Bernardino	37.1	33.2	354,411	338,710	15,701
71	Mt. Lassen	SW. Boundary Lassen National Park-Mineral	Tehama	Lassen	8.8	6.0	125,814	100,814	25,000
72	Idyllwild	San Jacinto Ranger Station-Keen Camp	Riverside	San Bernardino	15.5	15.5	188,084	148,084	40,000
73	Laguna	Laguna Junction, Cuyamaca Lake	San Diego	Cleveland	25.4	25.4	455,497	430,497	25,000
74	North Fork	Oakhurst Junction-Auberry (F.H. 47 to F.H. 48)	Madera-Fresno	Sierra	26.5	4.3	237,570	237,570	
75	Manzanita Lake	Lassen National Park Boundary-1 mi. W. of Forest Boundary	Shasta	Lassen	4.5	4.5	102,372	102,372	
76	Maricopa-Ventura (U.S. 399)	North Forest Boundary-South Forest Boundary	Ventura	Los Padres	43.4	25.7	1,149,576	335,202	814,374
77	Mt. Shasta-Mt. Lassen	Mt. Shasta City-NW. Boundary Lassen National Park	Siskiyou-Shasta	Shasta-Lassen	91.3	81.1	1,777,074	1,754,528	22,546
78	Generals Highway	Sequoia Park-General Grant Grove, Kings Canyon National Park	Tulare	Sequoia	10.4				
79	Morgan Summit-Morgan Springs	Morgan Summit-Morgan Springs	Tehama	Lassen	3.8	3.8	115,386	115,386	
81	Mammoth Lakes	U.S. Rte. 395-McLeod Lake	Mono	Inyo	10.7	9.0	231,656	231,656	
83	Pine Crest	F.H. 38 (Sonora Pass)-Pine Crest	Tuolumne	Stanislaus	0.9	0.9	32,297	32,176	121
84	Morro Bay (U.S. 466)	East Forest Boundary-West Forest Boundary	San Luis Obispo	Los Padres	3.6	3.6	128,052	128,052	
87	Clarks Fork	F.H. 35 (Ebbetts Pass)-F.H. 38 (Sonora Pass)	Tuolumne-Alpine	Stanislaus	21.0	9.2	345,462	345,462	
93	Salmon River	Somes Bar-Etna	Siskiyou	Klamath	60.0	17.0	582,677	511,648	71,029
95	Mt. Pinos	U.S. Rte. 99 (Near Lebec)-Bitter Creek Saddle	Kern-Ventura	Los Padres	21.3	2.7	152,478	152,478	
96	Mosquito Ridge	Foresthill-Beartrap Saddle	Placer	Tahoe	19.2	14.5	1,271,972	1,057,008	214,964
	Totals				1,661.3	924.0	30,015,567	24,320,309	5,695,258
	Survey						1,103,407	1,000,400	103,007
	Totals				1,661.3	924.0	$31,118,974	$25,320,709	$5,798,265

EXPRESSWAY DEVELOPMENT ON U. S. 99, north of Bakersfield, in Kern County.
New lanes built parallel to old highway

TRAFFIC

While the basic function of the Traffic Section remained unchanged, the diversity and volume of work undertaken and performed during the past fiscal year materially increased. To keep pace with the increased tempo of highway planning and construction resulting from the full impetus of the Collier-Burns Act, the personnel of the Traffic Section was increased 55 percent during the year. This increase in personnel not only enabled the Traffic Section to greatly expand its operations but also implemented study and analyzation of many problems relating to traffic conditions that are developing along with the increasing traffic volumes on the State Highway System. Under the departmental set-up, the work is handled by four divisions:

(1) Accident Analysis and Research;
(2) Geometric Design;
(3) Highway Planning Survey;
(4) Traffic Operations.

Accident Analysis and Research

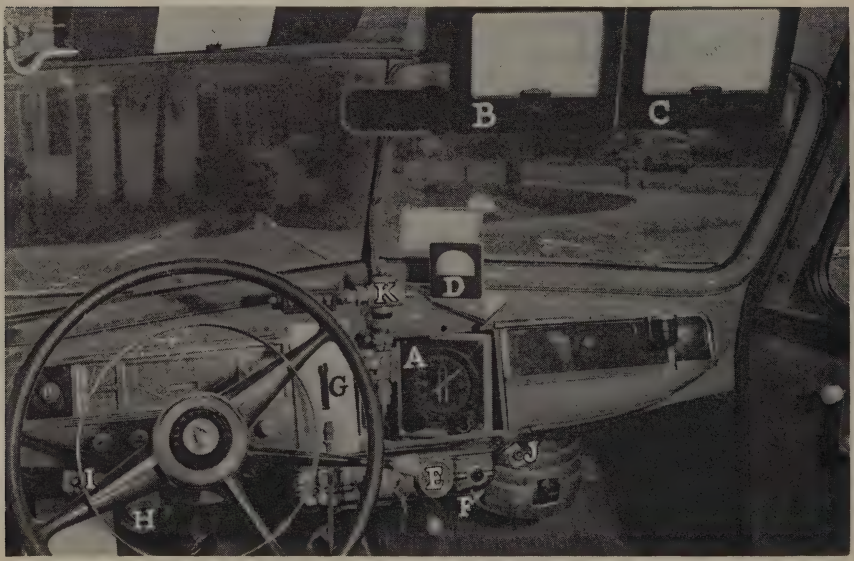
All reported accidents on the rural portion of the State Highway System, received through the offices of the California Highway Patrol are coded and tabulated. Special studies covering points of accident concentration and accident prone sections are made, the accident pattern analyzed and, where possible, corrections are made. Among the major sections studied were the Arroyo Seco Parkway, the Ridge Route at Grapevine, and the entire Feather River Route between Oroville and Hallelujah Junction. Corrective measures taken as a result of these studies were: Revisions in the median strip and emergency parking areas on the Arroyo Seco Parkway; a restricted speed zone of 45 miles per hour established on the Ridge Route near Grapevine; delineation and stated speed signs installed at various locations on the Feather River Route.

Included in research work being performed by this section is a special study covering the accident relationship of the various types of median strips on multilane highways.

Geometric Design

During the year this section reviewed the geometric design features of all preliminary and final plans submitted to headquarters for approval. The plans were reviewed with regard to their adequacy for present and anticipated traffic conditions and demands. This assurance of adequacy in geometric design has been one of the principal reasons for the pre-eminent position of the California Division of Highways in the national relationship. Data obtained from origin and destination studies were very carefully analyzed and used to obtain the most beneficial traffic service for the cities and communities through which alternate or by-pass routes were considered. Special studies and research work involving warning devices, design details, truck turning movements and origin-destination studies were started and completed either wholly by the section or in cooperation with the Highway Planning Survey.

SURVEY VEHICLES IN OPERATING ORDER
A. Flux valve erected
B. Target lights in operating position



INSTRUMENT PANEL IN STATION WAGON
A. Gyrosyn compass
B. Superometer
C. Gradometer
D. Excitation meter
E. Excitation control knob
F. Vertical gyro indicator light
G. Cycling switch
H. 12-volt ammeter
I. Target light switch
J. "Pass on Right" sign switch
K. Odometer

Highway Planning Survey

One of the major items of work of this section during the past fiscal year was the completion of a sight distance survey over the 1,923 miles of the State Highway System included in the Interstate Highway System. A sedan and a specially equipped station wagon were used in this survey. The equipment developed especially for the work consisted of an odometer, a horizontal gyroscope and a vertical gyroscope. Two-way radio contact was maintained between the two vehicles.

The survey was conducted at a uniform speed of 10 miles per hour with the sight distance being measured from the driver's eye, assumed to be 4½ feet above the road surface, to a target light on the lead vehicle with its center six inches above the road surface. In addition to sight distance, all changes in directions were recorded on all curves of three degrees or greater, the average maximum superelevation was recorded, and all grades in excess of three percent and 500 feet in length were recorded. While this work was performed by the Planning Survey, it was requested by the Bureau of Public Roads, and the data obtained is to be used in a report that will be presented to Congress.

Other major activities of this section consisted of assisting the districts in organizing and making origin-destination surveys and studies; coding, compiling and tabulating field data by means of automatic tabulating machines. With the Geometric Design Section and in cooperation with the Bureau of Public Roads a study was undertaken to determine the minimum truck turning radius for highway design purposes and also brake studies of passenger and commercial vehicles. This section also conducted the annual loadmeter survey at 20 stations where a similar number of trucks were weighed as in the preceding years; and the preparation of planimetric county maps covering general highways, bus and truck routes, school bus routes, postal routes and traffic.

Traffic Operations

The warrants and plans for all traffic signal and illumination projects were reviewed by this section. A total of 145 lighting and 83 signal installations were made during the year.

Engineering studies were made for over 250 speed zones with orders being prepared which established 43 twenty-five mile per hour zones, 173 thirty-five mile per hour zones and 21 forty-five mile per hour zones.

A major California development in highway signing was made during the year with the adoption of an overhead illuminated sign as standard for freeways. These signs, now in place on sections of the Bayshore Freeway and the Santa Ana Freeway, consist of metal standards located approximately 10 feet from the pavement edge with the sign proper, 2½ to 4 feet in width by 12 to 14 feet in length, at a height of 17 feet above the pavement. The signs are illuminated by a shaded slimline fluorescent lamp.

ADVANCE SIGN for connecting street on freeway

OVERHEAD ILLUMINATED SIGN at connecting street on freeway

Origin-destinations Surveys

During the year two major origin-destination surveys were completed. These surveys, made in cooperation with the U. S. Bureau of Public Roads, covered the metropolitan area of the City of Sacramento, and the coastal area between San Diego on the south and Long Beach on the north. The surveys were conducted by placing interview stations on the principal roads leading into and out of each area and by stopping a representative sample of motorists and obtaining their points of origin, together with their destinations. These data were tabulated and plotted so that the major traffic route desires could be obtained.

Using information obtained from the Sacramento Area Survey, the city and county in cooperation with the State have adopted a master plan for the development and construction of streets and highways through the metropolitan area that will relieve the present congested condition and will provide for adequate service to the area during anticipated future development and growth. The information obtained from the San Diego-Long Beach survey was under study at the close of the fiscal year with the aim of developing adequate highway facilities and service to that area.

During the latter part of the fiscal year, comprehensive origin-destination surveys were started in the triangular area bounded by El Monte, Riverside and San Bernardino. It is estimated that this survey and study will be completed early in 1950.

PUBLIC AND EMPLOYEE SAFETY

Public interest in traffic safety was greatly intensified during the 1948-49 Fiscal Year by national and state-wide campaigns sponsored by organized safety groups. With the increased interest many calls were received by the Safety Section. Assistance was given to numerous driver training classes and teacher study groups; to service clubs and civic groups; and to the California Highway Patrol Academy.

Emphasis by the Safety Section was given to the roadway—its geometric design, striping, road markings, signs, signals—an explanation of traffic engineering in an endeavor to obtain a better and safer understanding by the layman.

The employee safety program was expanded to obtain a more detailed study of employee and equipment accidents. Closer analysis and study of accident causes by an additional safety engineer assigned primarily to field activities developed a more effective accident prevention program.

Careful attention was given to the rulings of the Division of Industrial Safety and to the law as set forth in the Labor Code to obtain compliance in all Division of Highways activities.

CALIFORNIA AVENUE OVERCROSSING on U. S. 99 at Fresno

BRIDGES

Under the supervision of the Assistant State Highway Engineer, Bridges, the design and construction of structures during the 1948-49 Fiscal Year remained at a high level similar to that attained in the previous year. The value of the 92 bridge contracts completed during the year plus the estimated cost of bridges in completed road contracts was slightly in excess of $23,000,000.

As of June 30, 1949, there were 64 bridge contracts under way, the value of which totalled approximately $21,400,000, and in addition $4,000,000 in bridges and separation structures were included in 24 road contracts. Structures which have been designed but not yet let to contract total approximately $9,000,000.

Bridge Department personnel reached an all time high with an average of 349 during the 1948-49 Fiscal Year. Lowest monthly count was 340 and highest 363.

Details covering the various activities and sections of the Bridge Department are given in the following subsections.

PRELIMINARY INVESTIGATION FOR BRIDGES

Bridge design is based on the recommendations and factual data contained in a preliminary report. The recommendations are based on data compiled from field surveys and office information. General site data acquired consist of hydrologic, hydrographic, foundation and topographic features.

The department has developed and put into use, during the past year, a mobile foundation testing laboratory. The equipment includes a power driven drill rig for the more difficult exploration work, hydraulic jacks and beams for pile and foundation load tests and soil sampling and testing instruments, as shown in accompanying pictures. The use of the new equipment has resulted in greater design assurance and substantial economies in foundations.

The section has continued its investigation work in connection with county bridges on the Federal Aid Secondary System. Site surveys have been made and reports prepared for other state agencies. Approximately 75 bridge sites have been investigated and reported during the past year.

BRIDGE DESIGN

During the past year the Bridge Design Section has prepared plans for 131 bridges as a part of the 1949-50 Fiscal Year program.

These designs included many new freeway and parkway bridges for the San Diego, Los Angeles, and San Francisco areas, widening and

DETAILS OF PIERS AND GIRDER CONSTRUCTION on South San Francisco Overhead on Bay Shore Freeway, U. S. 101 Alt.

resurfacing of 33 desert bridges, and the design of many rural highway structures that needed replacement.

Six additional structures for the Hollywood Parkway in Los Angeles have been designed with an estimated construction cost of approximately $2,000,000.

The designs for the first two structures for the Harbor Parkway extending south from the central part of Los Angeles are under way. These two structures which are located at First and Second Streets will cost approximately $550,000.

Designs for five structures on the Ramona Parkway costing approximately $500,000 have been completed.

Design of three structures on the Eastshore Freeway in the Oakland area have been completed, the cost of which will be about $1,600,000.

Five structures on the Bay Shore Freeway in San Francisco have been designed. The cost of these five structures will be approximately $1,750,000. The designs for two structures extending the freeway south of San Jose are under way and their cost will be approximately $370,000.

Eight structures extending the coastal freeway south from San Diego have been designed which will cost approximately $1,000,000.

Structural steel for bridge members has become more obtainable than at any time since the beginning of the war. There was a gradual increase in the price of all construction items until January 1949, at which time prices began to drop. This was especially noticeable in the case of items which included steel. The drop in prices finally extended to concrete and other items of construction and was apparently due to a combination of increased efficiency of labor, increased competition and availability of materials.

The increase in present day prices, as compared with prewar prices, is only partially due to the cost of raw materials, and is mainly due to the increased cost of labor in connection with the manufacturing, fabrication, and erection. For this reason the Design Section has placed particular emphasis on the simplification of construction details, in order to cut down the amount of labor and thus reduce the cost of bridge structures.

Standard retaining wall design has been studied during the last year in an effort to obtain more economical designs consistent with desirable construction procedures on major projects. This activity has been prompted because such highways as the Los Angeles parkways involve the construction of many large and expensive retaining walls in order to reduce the cost of right of way required.

Standard designs for continuous concrete slab bridges have also been revised to meet new specification requirements and to simplify construction wherever possible.

Investigations are also underway on new types and methods of construction such as the use of precast and prestressed concrete with the idea of developing their economic possibilities for bridge construction.

For the past year one group in the Bridge Design Section have been engaged in predesign studies. Its duty is primarily to select the most suitable type of structure to fit the requirements. In ordinary cases their

BASCULE PIER AND COUNTERWEIGHT details on bridge across San Joaquin River at Mossdale on U. S. 50 in San Joaquin County

findings will depend on span lengths, economic considerations and climatic conditions. On the freeways and parkways in urban areas this situation is more complicated. It is necessary to consider not only structural but architectural requirements. The development must fit in with other improvements existing and proposed by other agencies. Pictorial drawings have been developed and found very useful in arriving at satisfactory designs. Two or more men spend full time on this phase alone and eight to ten are occupied in developing over-all layouts.

Preliminary advance studies have been progressing on complicated major layouts. One such study involves the provision for additional traffic lanes at Carquinez Bridge.

BRIDGE CONSTRUCTION

Bridge construction this year leveled off on the high plane which has become normal under the operation of the long-range program provided by the Collier-Burns Act. The maximum number of projects under way at one time decreased slightly, however, from a high of 91 for the previous year, to 84 this year. The high point in dollar value of bridge contracts reached during the year totaled $23,661,000 not including an additional amount of $6,567,000 of bridge work being constructed as a part of road contracts.

With the waning of the inflationary period, prices have leveled off and the average job is being constructed at slightly lower cost. Materials are becoming more plentiful and the problem of lack of steel and timber is gradually easing.

In the San Francisco Bay area, the Bayshore Freeway and Eastshore Freeway are taking shape. On the Bayshore Freeway structures at Broadway, Burlingame, Millbrae, South San Francisco Airport, San Bruno, and South San Francisco were completed and with the completion of the grading and paving in this area, nine miles of freeway were opened to traffic.

Structures at 19th, 23d, 29th and Fruitvale Avenues were completed on the Eastshore Freeway, and the first section of this new location is nearing completion.

The 42d Avenue Interchange project and the accompanying High Street Overhead are under construction and will become major links in the Eastshore Freeway upon completion.

In the Los Angeles area, work is concentrated on the Hollywood Parkway and many structures were completed this year. Among these were separations at Bonnie Brae and Beaudry Streets, Coronado and Vendome Streets, Virgil and Rosemont Avenues, and Hoover Street. Projects now under construction will complete all except one of the structures from the four-level structure to Western Avenue. The four-level structure, separating grades at the intersection of the Hollywood, Arroyo Seco, and Harbor Freeways, is scheduled for completion this year. Because of its unique design, this structure is attracting nation-wide attention. The various structures at the parkway crossing of Figueroa Street are nearing completion.

Work on the Santa Ana Parkway is under way at its intersection with Atlantic Boulevard. A grading and paving contract between Soto

CONSTRUCTION OPERATIONS at Figueroa Street Crossing of Hollywood Parkway in Los Angeles (U. S. 101)

Street and Eastman Avenue connected several structures recently completed, and added two miles to the freeway network in the Los Angeles area.

Outside the metropolitan areas, a number of other bridge contracts were either completed or approaching completion throughout the State. Major separation structures at Bakersfield and Fresno were completed this year adding to the gradual transformation of U. S. 99 into a four-lane divided highway. This progress will be further advanced by the completion of a contract now under way for a parallel bridge across the San Joaquin River at Herndon, north of Fresno.

Three movable structures were under construction during the past year.

These include a bascule bridge across the San Joaquin River at Mossdale which is nearing completion. With the existing parallel structure, it will extend the four-lane divided section of U. S. 50 through this area.

Another movable bridge is the vertical lift structure nearing completion across Three-mile Slough channel on the river road between Antioch and Sacramento.

The third movable span was a swing bridge across the Sacramento River at Butte City. This badly needed crossing in the heart of the rice country replaces a ferry which has been in service for many years.

The underpass in Roseville and the Twefth Street underpass reconstruction in Sacramento will relieve serious bottlenecks in areas carrying exceptionally heavy local traffic.

This last year was the first in which the full effect of the acceleration of the Collier-Burns Act reached its peak and leveled out at the new tempo. The benefits and the future possibilities of the accelerated program are now becoming plainly visible. With the opening of several miles of freeways in the major metropolitan areas and many other improvements throughout the State, the traveling public is provided with concrete examples of the benefits to be derived from the long-range program now under way.

BRIDGE MAINTENANCE

Periodic inspection and reports covering maintenance, minor improvement and capacity rating of approximately 4,800 State Highway and 50 State Park structures is the primary function of Bridge Maintenance Section. In addition annual inspection is made on the more than 900 state highway grade crossings. A program to bring grade crossing reports up to date was undertaken during the year with 300 new reports submitted by June 30. Maintenance repairs, painting and minor replacements totaled $412,000 during the 1948-49 Fiscal Year. A program of increased bridge painting under contract was started this year and will be expanded in the future to keep maintenance of steel structures abreast of the severe weathering which bridges in some localities must withstand.

A total of 246 county or city bridges were investigated on formal request from the local authorities, and 191 of these structures were posted for restricted loading. Other services included preparing plans for major repair or replacement of five state forest bridges.

TWO 50-FOOT STEEL GIRDER SPANS which replaced a collapsed 100-foot truss span on bridge across Butte Creek in Butte County

A net reduction of 14 posted state highway structures was attained during the year. This represents the difference between the number of posted structures eliminated and the number of new postings required by deterioration of the older existing structures. As of June 30, 1949 there were 160 bridges posted for load or load and speed and 117 bridges posted for speed alone.

The accompanying list includes all structures on the State Highway System including the San Francisco-Oakland Bay Bridge. Complex structures are listed as to number and length on basis of main span but areas have been broken down and appear under the various types involved. Areas are based on clear roadway width including sidewalks.

BRIDGES ON THE STATE HIGHWAY SYSTEM SEGREGATED AS TO NUMBER, LENGTH AND AREA BY STRUCTURE TYPE

(As of June 30, 1949)

Structure type	*Number*		*Length (feet)*	*Area (square feet)*
	1949	*1948*	*1949*	*1949*
Concrete arch	277	274	44,992	1,005,665
Concrete girder	953	932	145,591	7,138,647
Concrete slab	1,470	1,369	77,420	2,780,990
Masonry arch	44	46	1,448	30,946
Subtotal concrete and masonry	2,744	2,621	269,451	10,956,248
Steel arch	4	4	1,618	25,194
Steel plate girder	88	71	74,233	1,592,847
Steel stringer	248	241	50,226	2,041,834
Steel deck truss	29	29	21,278	1,130,628
Steel pony truss	46	48	16,227	213,849
Steel through truss	96	98	75,856	1,421,561
Suspension	5	5	16,100	898,991
CMP multiplate and arch	43	39	1,016	34,540
Subtotal steel	560	535	256,554	7,359,444
Timber arch	6	6	1,434	11,306
Timber stringer	1,118	1,164	144,497	3,428,124
Timber deck truss	25	26	7,616	76,108
Timber pony truss	18	18	5,065	82,574
Timber through truss	13	15	3,845	45,819
Subtotal timber	1,180	1.229	162,457	3,643,931
Total bridges	4,483	4,385	688,462	21,959,623
Underpasses	156	151		
Overheads *	97	86		
Combined bridge and overhead *	33	27		
State highway separations *	23	16		
Road undercrossings *	76	56		
Road overcrossings	86	68		
Pedestrian undercrossings *	101	96		
Pedestrian overcrossings	18	18		
Tunnels	17	16	12,226	
Retaining walls	11	11	14,318	
Miscellaneous	25	18	121	9,888
Total structures	4,790	4,667	715,127	21,969,511
Railroad grade crossings	929	922		

* Separations so noted are listed under structure type above.

NOTES: Four underpasses, four overheads and one bridge and overhead also serve as state highway separations, and two tunnels serve both as underpasses and state highway separations.

FOUR-LANE DIVIDED HIGHWAY DEVELOPMENT across San Joaquin River at Fresno-Madera County Line at Herndon, U. S. 99. New bridge paralleling old

BRIDGE RESEARCH

During the year the organization of the Bridge Research Section was completed with three components—hydraulics, economics and engineering geology. This section has also developed and cataloged a reference library of 2,500 titles and a large file of classified bulletins, pamphlets and clippings, most of which are available for loan as well as office reference.

Hydraulic studies and reviews are made regularly of the more complicated bridge-waterway problems. Notable this year was a thorough study of the rise and fall of mining debris in the channel of the Yuba River near Marysville over a 100-year period, in order to determine the need for and extent of protection or reconstruction of piers of the D Street Bridge. Another was the extended reconnaissance of nearly 200 bridges and dips on the Niland-Mecca Road preliminary to a program of eliminating load restriction on this road, and the final determination of waterway requirements for the 60 crossings of shallow arroyos between Niland and Frink. Each of these studies was correlated with geological exploration.

Economic studies regularly include appraisals of damage to bridges by traffic accident and to private property by interference with drainage.

Special problems are of greater interest, of course, and one of considerable magnitude this year was a report on the feasibility and practicability of the acquisition by the State of California Toll Bridge Authority of the two toll bridges across San Francisco Bay, known as the San Mateo and Dumbarton Bridges. This report was made pursuant to Senate Resolution No. 92.

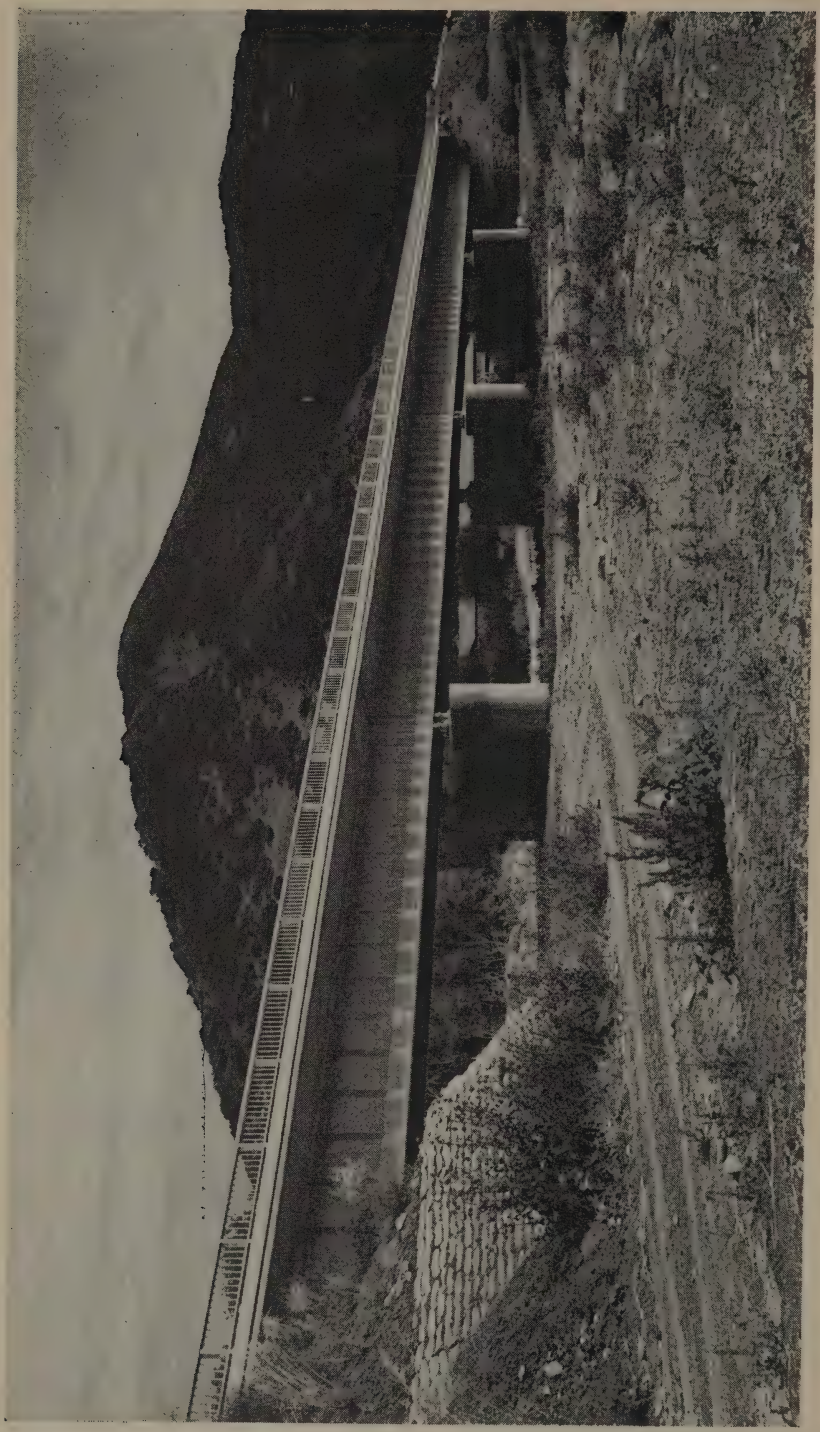
Another special report was prepared in accordance with Assembly Resolution No. 46 covering the "necessity and feasibility of constructing a San Pedro-Wilmington-Terminal Island and Long Beach "T" Tunnel to connect the Harbor Freeway with the Long Beach Freeway."

The systematic use of engineering geology has been developed in the Bridge Department under the direction of specialists. The field of work includes exploration and analysis of subsurface strata for tunnels, deep bridge foundations and slide areas in major grading projects. The cost of making expensive load tests has been greatly minimized by the simplified equipment described briefly under Preliminary Investigation.

FEDERAL AID SECONDARY COUNTY BRIDGES

During the past year, close cooperation has again been maintained between the Bridge Department and the various counties engaged in the programming, design, and construction of bridges under the federal aid secondary program for the improvement of county roads.

Although there were a few less F. A. S. bridge contracts under way during this year than during the last, the estimated value of the work was practically the same. There was a total of 27 such F. A. S. contracts in progress during the year, involving the construction of 41 bridges with an estimated cost of $4,409,000. These contracts were spread among 20 different counties.



STEEL GIRDER BRIDGE on U. S. 101 across Nojoqui Creek in Santa Barbara County

A total of 18 contracts distributed among 14 counties involving the construction of 24 bridges was completed during the year at an estimated cost of approximately $2,195,000.

The Bridge Department has continued to work closely with the counties during the preliminary planning and design stages of the projects and has furnished such assistance as has been requested. Fourteen counties out of the 20 in which contracts were in progress were able to utilize their own personnel in the preparation of the plans for the work. In practically all cases the preliminary field surveys were made by the county engineering staffs and the pertinent data collected by them.

Resident engineers and assistants have been supplied by the counties to look after the construction of 13 of the projects. Personnel for the remaining 14 projects was furnished by the Bridge Department at the request of the counties involved. In most instances the personnel for stake-out crews was furnished by the counties.

The class of work being done on these county projects continues to be of a high standard and is something to which the counties may point with pride.

RAILROAD GRADE SEPARATIONS AND CROSSING PROTECTION

On June 30, 1948, there was a total of 28 railroad highway grade separation structures under contract, including the right and left structures on divided highway at three locations. Twenty-five of these separations were completed during the 1948-49 Fiscal Year, and contracts were awarded for 12 additional overheads and underpasses, making a total of 15 grade separations under construction as of June 30, 1949.

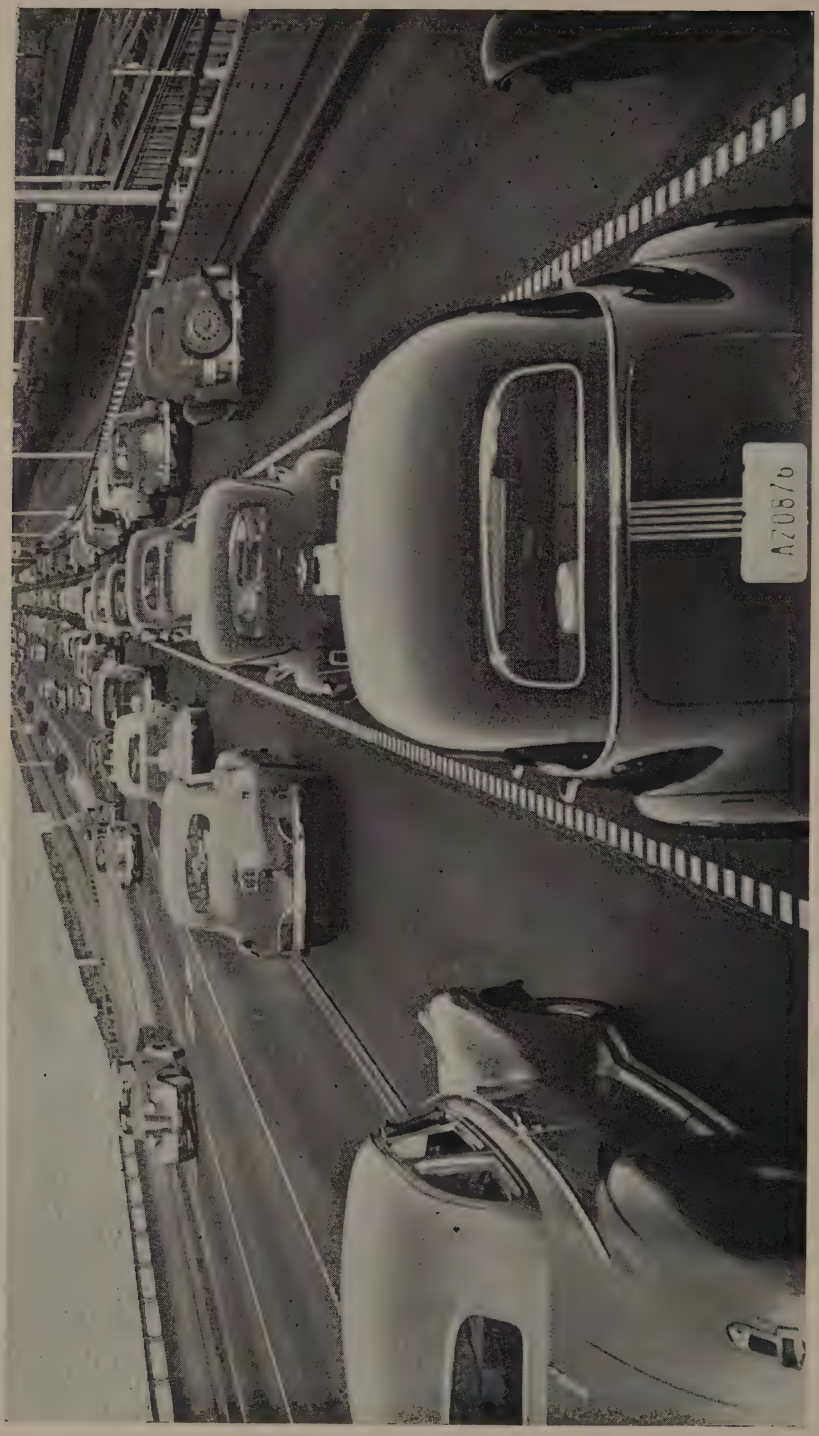
Two of the separation contracts awarded during the year eliminate existing grade crossings on the state highway, one replaces an existing separation, and the remaining nine are separations on new highway alignment. The railroad contributed 10 percent of the cost for the one separation which resulted in complete closure of the existing crossing.

Flashing light signal installations were completed at 46 federal aid secondary grade crossings during the year. Of the 61 crossings on this program, authorized during the 1947-48 Fiscal Year, seven remain to be completed as of June 30, 1949.

Although no major signal program was undertaken during the year, flashing light installations were programmed or installed at 13 crossings, largely in connection with major highway projects. At three locations where signals were placed the crossings were completely rebuilt as specific small projects to improve highway alignment. Installation of train-actuated flood lights, railroad to pay 50 percent of the cost, have also been programmed at three existing grade crossings.

SAN FRANCISCO-OAKLAND BAY BRIDGE AND CARQUINEZ BRIDGE OPERATION AND MAINTENANCE

Traffic and Revenue—The total number of vehicles which crossed the San Francisco-Oakland Bay Bridge between July 1, 1948, and June 30, 1949, was 26,686,901, a gain of 2.72 percent as compared to the 25,981,259 vehicles of the previous fiscal year. The daily average was 73,115 vehicles.



TRAFFIC ON SAN FRANCISCO-OAKLAND BAY BRIDGE. Looking easterly on Oakland side

A total of 22,230,212 toll-paying interurban train and bus passengers crossed the bridge during the year, a decrease of 10.39 percent as compared with the preceding year.

Revenue derived from vehicular tolls, interurban train passenger tolls, rents, interest, and miscellaneous services (exclusive of collections for roadside and tow services) amounted to $8,422,418.45. This was an increase of $172,155.37 as compared with the previous fiscal year.

No changes in toll rates were made during the year.

Financing—Bond retirements during the year totaled $7,288,000, of which $2,255,000 represented bonds maturing on September 1, 1948, and March 1, 1949; and $5,033,000 represented sinking fund bonds called in advance of their maturity dates. The bonded indebtedness at the end of the fiscal year was $27,752,000.

Bridge Maintenance—The bridge painting crew consisted of two foremen, six leadingmen, and an average of 42 painters, two laborers, and four highway equipment operator-laborers, which represented a slightly higher level than the average number employed in the previous year. Substantial progress was made in renewal of painted surface during the year. Painting of all the through trusses on the East Bay Crossing above the upper deck was completed. Painting of the main cables and the suspender ropes on the West Bay Crossing was largely completed, leaving only a part of the final coat to be applied to the main cables. During the winter months a portion of the painting crew was assigned to redecorating the interior of the Administration Building at the Toll Plaza.

The total amount expended on painting, including scaffolds, traveling platforms, and track, was $292,353.22.

The large volume of vehicular traffic maintained during the year made it necessary to continue the emergency service fleet at the same size as during the preceding two years. In addition to the tow trucks on call at fixed stations, emergency service pickup trucks continued to patrol the bridge deck during hours of peak traffic. All emergency service vehicles were operated under the immediate control of a highway maintenance leadingman who was able to maintain constant contact with the various units by means of a two-way, frequency-modulated, radio telephone system. A total of 11,234 services were rendered during the year to vehicles stalled or disabled on the bridge.

Structure Maintenance—The timber fender of Pier W-5 suffered extensive damage when a ship collided with it on January 12, 1949. Plans for repair of the damage were completed by the end of the fiscal year and satisfactory arrangements made with the ship owner and its insurance carrier for reimbursement to the State.

No other unusual problems of structural maintenance occurred.

Traffic Studies—Traffic lane counts on the upper deck by means of automatic counters were continued at intervals during the year. The data obtained have been extremely valuable in determining land usage and capacities, and have demonstrated the high efficiency of bridge operation from the traffic viewpoint. Special semiannual counts were made on Sunday and Monday, July 18 and 19, 1948, and on Sunday and Monday, January 16 and 17, 1949.

Toll Collection—In order to serve the continuing large volume of traffic, the toll collection force was kept at about the same size as during the preceding year. However, at the end of the year, plans were being made for an enlargement of the force in order to operate the four new toll booths north of the Administration Building. These four new booths are for the accommodation of west-bound lower-deck traffic and, except for a few items, were completed before the end of the fiscal year. Several important elements, however, had not been received at the end of the year although it was expected that they would be delivered within a short period and the contract completed within a few months after the end of the year. Toll registration and collection equipment for the new, as well as the existing, toll lanes was ordered in the fall of 1948. However, only a part of this new equipment had been delivered by the end of the fiscal year. It was anticipated that the new toll lanes would be placed in operation about September, 1949.

Accounts Audited—The San Francisco-Oakland Bay Bridge accounts for the fiscal year ended February 28, 1949, were audited and found in good order.

Tabulation—Data on bridge traffic, revenues, and finances are shown in the following tabulations.

Carquinez Bridge

Maintenance—As in previous years, structural maintenance, including the maintenance of the marine and aerial signals on Carquinez Bridge, was continued under the jurisdiction of the San Francisco-Oakland Bay Bridge organization. Roadway maintenance was handled by District X of the Division of Highways.

The principal item of maintenance during the year was the continuing painting of the bridge structure. During most of the year the painting crew consisted of one foreman and seven painters.

Because of navigation requirements, it was necessary to maintain a 24-hour watchman service at the bridge in order to keep navigation lights on at all necessary times and to operate fog signals whenever required.

The total maintenance cost during the year (exclusive of insurance and improvements) was $69,903.05 paid from the State Highway Fund.

A contract for the construction of a new fender at Pier 4 and for the removal of the old wharf adjacent to this pier was awarded and completed during the fiscal year. The cost of this work was paid from the Carquinez Bridge Revenue Account.

In the interest of safety to bridge maintenance crews, plans and specifications were prepared for the removal of the state-owned 2,300-volt power line supported on the east truss of the bridge and for the substitution therefor of a cable enclosed in conduit under the east sidewalk. It was expected that the contract for this work would be awarded shortly after the end of the fiscal year, the cost to be paid from the Carquinez Bridge Revenue Account.

Tabulations—Data on the maintenance expenses at Carquinez Bridge and on expenditures from the Carquinez Bridge Revenue Account are furnished in the following tabulations.

TABLE I—SAN FRANCISCO-OAKLAND BAY BRIDGE

EXPENSE OF MAINTENANCE AND OPERATION

Fiscal Year, July 1, 1948, to June 30, 1949

Administration expense	$37,255.68	
Supervising engineer and staff (maintenance)	25,600.62	
Bridge structure, maintenance and repair	21,974.48	
Painting, maintenance and repair	292,353.22	
Roadway, fire and tow service	107,413.65	
Electrical energy, power and light	14,471.01	
Electrical and signal, maintenance and repair	56,696.38	
Administration building, maintenance and repair	30,887.89	
Roadway, maintenance and repair	37,458.99	
Shop and garage	6,062.77	
Toll collection	308,941.38	
Accounting office, staff and supplies	85,118.60	
Auditing	2,051.35	
Printing	8,101.37	
Traffic engineering	7,933.57	
		$1,042,320.96
Insurance		
Bridge structure and physical damage	$112,875.60	
Bonding and burglary	638.03	
Compensation	4,938.67	
Retirement	62,084.02	
		180,536.32
Suspense items to be rebilled or transferred	$516.90	
Transfer of equipment to Headquarters Shop	41,493.80	
		—42,010.70
Total		$1,180,846.58

TABLE II—SAN FRANCISCO-OAKLAND BAY BRIDGE

FINANCIAL AND REVENUE ACCOUNT

Revenue

	Fiscal Year July 1, 1948 to June 30, 1949	Nov. 12, 1936 to June 30, 1949
Traffic tolls	$7,906,274.51	$74,914,431.38
Train passenger tolls	259,998.63	4,555,595.73
Total toll revenue	$8,166,273.14	$79,470,027.11
Rents from concessions	176,075.05	1,244,003.26
Investment and profit, reserve and maturity fund investments	80,000.00	724,083.22
Interest on time deposits		37,806.79
Over and short account	70.26	4,502.23
	$8,422,418.45	$81,480,422.61
Commute suspense	192.00	9,786.00
Scrip suspense	437.50	7,886.55
Damage claim recovery suspense	50,000.10	50,000.10
	$8,473,048.05	$81,548,095.26
Balance June 30, 1948	6,971,500.10	
	$15,444,548.15	$81,548,095.26

Disbursements

Interest paid on outstanding bonds	$725,168.33	$25,175,166.52
Bonds redeemed	7,288,000.00	44,788,000.00
Redemption premium on bonds	137,820.00	4,078,290.00
C. T. B. A. expense		153,478.68
Fiscal agents' expense	24,247.73	266,505.33
Transfer from American Trust Company (refinancing)		—107,643.26
Registration, paying and collection agents' expense	8,517.69	114,795.82
Use and occupancy insurance		225,794.01
Counterfeits, mutilated coins and uncollectibles	53.15	1,608.33
From construction fund		—429,166.67
Miscellaneous revenue adjustments		20,525.25
	$8,183,806.90	$74,287,354.01
Funds on hand June 30, 1949		
Accounts receivable	$133,826.37	$133,826.37
Cashier's revenue fund	33,974.86	33,974.86
Cashier's change fund	20,000.00	20,000.00
	$187,801.23	$187,801.23
Funds in hands of fiscal agents		
Anglo California National Bnak	$1,558,713.62	$1,558,713.62
Bank of America, N.T. & S.A.	1,514,226.40	1,514,226.40
	$3,072,940.02	$3,072,940.02
Investments		
2 percent treasury bonds	$4,000,000.00	$4,000,000.00
Total funds on hand June 30, 1949	$7,260,741.25	$7,260,741.25
	$15,444,548.15	$81,548,095.26

TABLE III—SAN FRANCISCO-OAKLAND BAY BRIDGE

CONSOLIDATED BALANCE SHEET AS OF JUNE 30, 1949

Assets

Current assets			
Cash (available)		$33,974.86	
Cash (change fund)		20,000.00	
Construction fund (State treasury)		40,377.92	
Toll revenue fund (fiscal and subfiscal agents)			
Anglo California National Bank		1,558,713.62	
Bank of America, N. T. & S. A.		1,514,226.40	
Investments			
2 percent U. S. Treasury bonds		4,000,000.00	
Accrued interest		23,260.87	
Accounts receivable		133,826.37	
Credit account deposits		41,011.00	
			$7,365,391.04
Fixed assets			
Investment in bridge (vehicular)		$54,768,809.10	
Investment in bridge (interurban)		18,318,305.81	
Investment in bridge (Port of Oakland overhead)		443,508.44	
Investment in bridge (improvement in facilities)		436,020.53	
		$73,966,643.88	
Retirement of fixed assets			
Vehicular	$106,766.06		
Interurban	3,396,784.76	—3,503,550.82	
			$70,463,093.06
Deferred charges			
Prepaid use and occupancy insurance			29,466.78
Total assets			$77,857,950.88

Liabilities and Excess

Fixed liabilities			
Bonded debt			
Sinking fund, 1¾ percent		$412,000.00	
Serial revenue, 2 percent		25,025,000.00	
Serial revenue, 3¾ percent		2,315,000.00	
			$27,752,000.00
Deferred liabilities			
Scrip suspense		$9,786.00	
Commute suspense		7,886.55	
Accrued interest on bonds, 1¾ percent	$2,309.27		
Accrued interest on bonds, 2 percent	165,926.63		
Accrued interest on bonds, 3¾ percent	28,780.23	197,016.13	
Accrued expenses		7,388.95	
			$222,077.63
Construction fund			40,377.92
Liability for credit account deposits			41,011.00
Damage claim recovery suspense			50,000.10
Total liabilities			$28,105,466.65
Excess of assets over liabilities			49,752,484.23
			$77,857,950.88

TABLE IV—SAN FRANCISCO-OAKLAND BAY BRIDGE

CLASSIFICATION OF VEHICLES

Period	Automobiles, automobile trailers and light commercial vehicles		Busses	Trucks and truck trailers	Motorcycles and tricars	Total toll vehicles	Free vehicles	Total vehicles
	Cash toll	Commutes						
November 12, 1936 to June 30, 1947	140,563,316	16,584,031	4,208,964	10,686,892	556,986	172,600,189	10,275,368	182,875,557
July 1, 1947 to June 30, 1948	20,498,397	2,303,477	546,174	1,848,298	66,688	25,263,034	718,225	25,981,259
July, 1948	1,784,978	172,014	44,411	163,806	6,384	2,171,593	61,948	2,233,541
August, 1948	1,875,565	173,625	44,524	171,166	7,053	2,271,933	63,495	2,335,428
September, 1948	1,764,294	164,530	41,733	160,360	7,315	2,138,232	59,614	2,197,846
October, 1948	1,832,885	202,826	42,468	164,792	5,578	2,248,549	62,468	2,311,017
November, 1948	1,728,546	200,685	39,723	159,117	5,153	2,133,224	59,247	2,192,471
December, 1948	1,718,476	193,326	42,084	165,672	3,617	2,123,175	63,319	2,186,494
January, 1949	1,656,916	188,415	38,936	154,635	3,336	2,042,238	61,004	2,103,242
February, 1949	1,550,868	171,497	35,129	143,706	3,349	1,904,549	58,222	1,962,771
March, 1949	1,768,327	219,676	39,287	169,250	4,076	2,200,616	67,838	2,268,454
April, 1949	1,826,332	204,746	38,796	165,694	5,440	2,241,008	62,810	2,303,818
May, 1949	1,830,625	203,214	38,512	169,573	5,500	2,247,424	63,999	2,311,423
June, 1949	1,823,544	178,153	36,705	171,868	5,741	2,216,011	64,385	2,280,396
Totals—July 1, 1948 to June 30, 1949	21,161,356	2,272,707	482,308	1,959,639	62,542	25,938,552	748,349	26,686,901
Totals since opening of bridge on November 12, 1936	182,223,069	21,160,215	5,237,446	14,494,829	686,216	223,801,775	11,741,942	235,543,717

TABLE I—CARQUINEZ BRIDGE

MAINTENANCE EXPENDITURES—STATE HIGHWAY FUND

July 1, 1948, to June 30, 1949

Administration, engineering and accounting	$3,489.60
Marine and aerial signals	8,910.41
Bridge structure	815.91
Painting	47,181.63
Building maintenance	5,505.50
Total	$65,903.05

TABLE II—CARQUINEZ BRIDGE REVENUE ACCOUNT

Balance June 30, 1948	$153,201.04	
Miscellaneous income	190.00	
		$153,391.04
Expenditures		
Work Order COF-6, Lift span, Antioch	$1,547.07	
Work Order COF-10, Approaches, Preliminary Engineering, Antioch	55.20	
Work Order COFC-1, Repairs, Antioch	5,041.76	
Work Order COF-11, Roof, Carquinez	357.00	
Work Order COF-12, Fenders, Preliminary Engineering, Carquinez	1,044.35	
Work Order COF-13, Power Line, Preliminary Engineering, Carquinez	106.24	
Work Order COFC-2, Fender Repair, Carquinez	33,814.43	
		41,966.05
Balance before deducting unexpended balance of current work orders		$111,424.99
Unexpended balances of current work orders		
Work Order COF-6, Lift span, Antioch	$601.92	
Work Order COF-7, Safety railings, Antioch	231.81	
Work Order COF-13, Power Line, Preliminary Engineering, Carquinez	893.76	
Work Order COFC-2, Fender Repair, Carquinez	27,208.42	
		28,935.91
June 30, 1949, balance available for future work orders		$82,489.08

PERSONNEL—SERVICE AGREEMENTS AND PREVAILING WAGES

PERSONNEL

Recruiting

The recruiting program for additional personnel to carry on the accelerated highway program was to a great extent completed during the calendar year 1948. During this year the total number of employees was increased by approximately 1,000—that is, from 6,000 to slightly more than 7,000.

In effecting this increase in total staff, 2,588 appointments were made under temporary authorization and 2,307 probationary appointments were made. During this year 2,656 employees of the division were separated. This total does not include the separations of employees appointed under emergency, or 4,607 additional separation transactions. Early in 1948, approximately 17 percent of all positions in the division were filled by temporary appointees. By the end of the year the number had been reduced to about 9 percent.

The recruiting program for engineers has been continuous since V-J Day, with an overall increase in the department of about 1,400 engineering employees. The largest single element of increase was obtained in the junior civil engineer classification, where a total of over 700 young engineers are now employed.

In 1946 it was predicted that a total of 2,700 engineering employees would be needed to handle the accelerated highway program. The division now has a total of slightly over 2,600 engineering employees.

Classification and Salaries

During this year 6,635 employees received "corresponding step" increases because of increased salary range. In addition, presentations have been made to the State Personnel Board regarding job classifications and working hours.

Training of engineering personnel has been carried on in districts through classes initiated by employee groups for the purpose of preparing for civil service promotional examinations and for the registration examination. Considerable success has been obtained on a state-wide basis in passing the registration examination, as shown by the fact that in the past two years the number of unregistered engineers in the classification of associate and above had decreased from 18 percent to less than 9 percent.

Due to the recent legislation providing for full retirement credit for service prior to 1932, it is anticipated that the result to the department will be an earlier retirement of personnel in the higher classifications. Consequently, the need for trained personnel to fill these positions will be increased. With this changed condition, it is believed that the training programs instituted by the districts will prove of value to individuals and the department alike.

The administration of the veterans-on-the-job training program has continued, and at this time over 60 veterans are enrolled on the program, and 14 veterans have completed the training course by reaching the attainment grade of junior civil engineer.

Disciplinary Actions

During 1948 charges were filed to effect the dismissal of only one employee with permanent status. Five limited term employees were dismissed and 27 probationers were rejected. Nine employees received disciplinary suspensions of 30 days or less.

A few appeals were filed, but the State Personnel Board supported the department's action in all cases.

SERVICE AGREEMENTS AND MISCELLANEOUS SMALL CONTRACTS

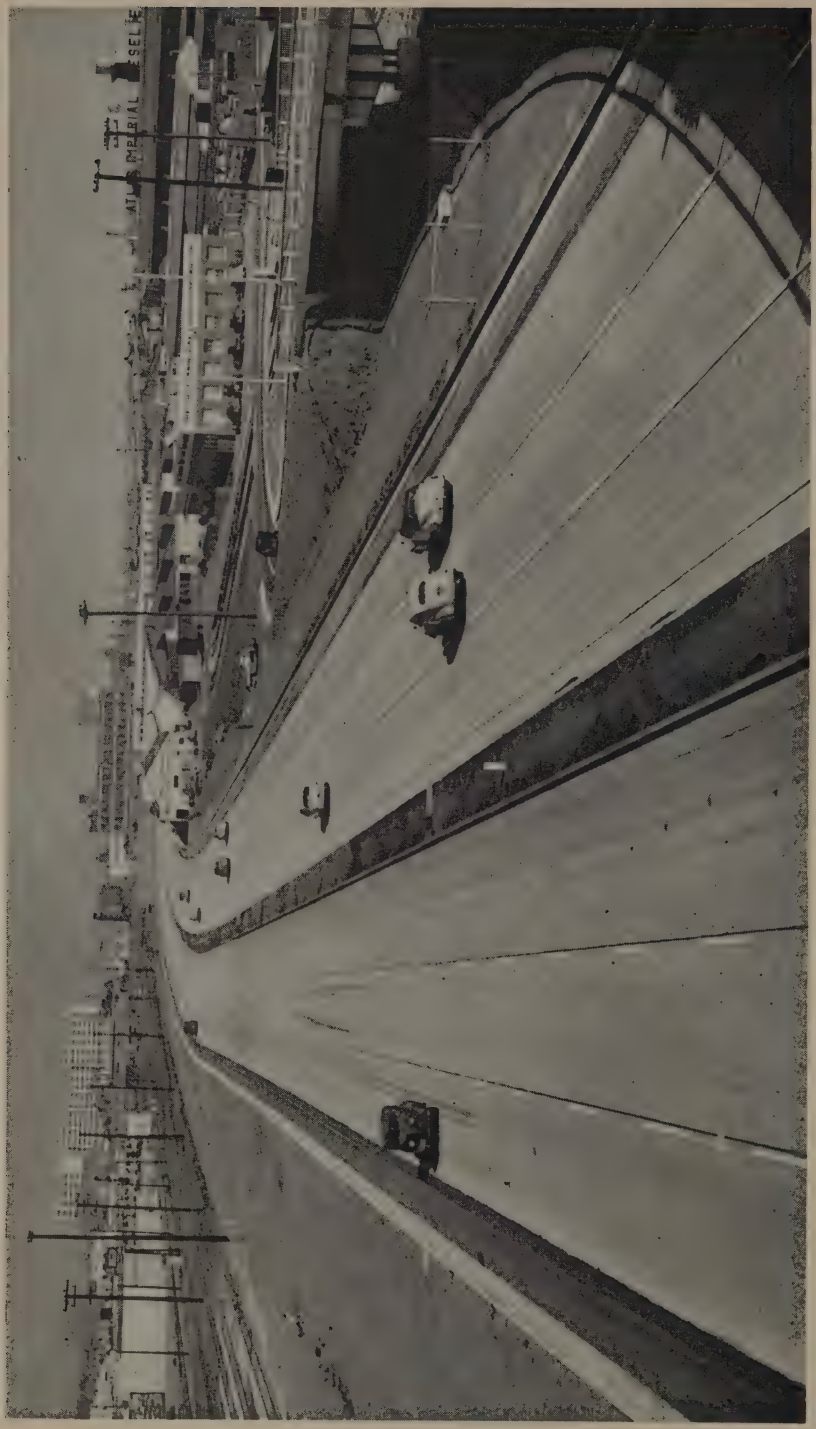
The approval of service agreements under Sections 135, 136, and 136.5 of the State Contract Act, which incorporates rental of equipment and clearance of right of way, covered a total of approximately 4,000 the past year.

PREVAILING WAGES AND LABOR RELATIONS

As provided under the Prevailing Wage Law, it is mandatory that the department determine and specify the minimum wages to be paid on contract work. These wages are incorporated in the contract proposals. As was the practice during the previous year, the department has acknowledged agreements reached between organized labor and the associated contracting industry.

Since the contracts are almost invariably performed by contractors who are signators to the agreements, upon legal advice the terms of the wages shown in these agreements are incorporated in the state highway contracts.

For those wage scales which are not incorporated in the agreements, wage surveys are made of the industry and craft concerned to determine the prevailing wage for the area desired.



EAST SHORE FREEWAY IN OAKLAND

RIGHT OF WAY

In the Second Annual Report covering the 1947-1948 Fiscal Year, attention was directed to the fact that the Right of Way department had completed its largest program in history in both dollar volume and parcel volume exceeding any previous year by over 100 percent. Total acquisition expenditures, for that year were in the amount of $17,652,900, consisting of 2,342 parcels acquired by negotiation and 90 parcels through eminent domain proceedings, which necessitated 2,512 separate transactions and the execution of approximately 5,000 documents to secure clear title to all parcels acquired.

During the last fiscal year (1948-1949) a total volume of right of way acquisition work handled again was in excess of double the total volume handled during the preceding year.

In the handling of this huge volume, the intensive educational in-training program and organizational streamlining carried on during the previous two-year period paid real dividends to the Division of Highways.

Following is a tabulation of right of way acquisition work handled during the last fiscal year:

Total transactions	3,630
Total parcels acquired	3,385
Total parcels acquired through eminent domain proceedings	135
(Which includes 45 parcels acquired from owners where title could not be cleared, etc., in all of which cases condemnation suit was filed by mutual agreement and 90 parcels acquired through contested trials.)	
Direct payments made during the fiscal year for right of way acquisition including all functions	$31,887,100
(This figure does not include current obligations unpaid at end of fiscal year and deferred obligations as listed below.	
Total unpaid current obligations at end of year	$3,915,500
Total deferred obligations at termination of year	$2,217,650
(Including withheld amounts in right of way contracts, obligations through service agreements for moving improvements, utility relocation agreements, etc.)	
Total appraised value of parcels covered by eminent domain proceedings at termination of fiscal year:	
(a) Parcels set for trial	$700,875
(b) Still under negotiation and not yet set for trial	$3,357,000
Total value of parcels under condemnation	$4,156,875

In addition to the above volume of work, the Right of Way department through agreement between the State Highway Engineer and the State Public Works Board, during the fiscal year handled the following volume of land acquisition work for other state departments:

91 parcels (included in total of 3,385 parcels as acquired) $3,320,500

To complete the acquisition of right of way on this program and to deliver clear title to the various agencies of the State necessitated the securing of the execution of over 6,800 separate documents.

The percentage of overhead to direct payments for land in carrying out this program, which includes the overhead involved in trial of condemnation cases, was reduced from 7.4 percent in the previous fiscal year to 5.26 percent for the period of this report. The reduction is partly due to increased volume and partly to increased efficiency.

Total income for rentals, leases, salvage of buildings, etc., during the year represented a net return to the Division of Highways of $1,780,900+.

Intensive field investigation in the metropolitan areas of San Francisco and Los Angeles during the latter part of the fiscal year was made to determine the present housing situation in both areas. This investigation has disclosed the fact that the home owner who is required to sell his residential property to the State for highway right of way purposes can now without difficulty purchase a comparable residence property with the funds he receives from the sale of his original holding to the State.

It is obvious that tenants in state-owned residential properties are having no difficulty finding other comparable housing facilities.

The policy of selling state-owned residential buildings at public auction to be moved to other locations and rehabilitated, with the successful bidder being required to take the tenant along with the building and permit him to continue occupancy in the premises for a minimum period of six months under O. P. A. rental ceiling, or in lieu thereof, supply the tenant with other comparable housing facilities, has been continued throughout the fiscal year. However, during this annual period over 95 percent of the tenants protected by the covenant have sold their right of continuous occupancy to the successful bidder for prices varying from $50 to $200. This price indicates that tenants are waiving the continued occupancy protection that has been afforded them by the State for the approximate cost of moving their personal effects and furniture. This fact verifies our opinion that tenants in the metropolitan areas are having no difficulty finding other housing facilities.

The Division of Highways therefore, with the approval of the California Highway Commission, is discontinuing the policy of selling residential buildings at public auction with the tenants' protective covenant shortly after the start of the next fiscal year.

While the state highway development program will require the Right of Way Department to handle an acquisition program during the 1949-50 Fiscal Year representing a much larger parcel volume than this fiscal year and approximately the same amount of expenditures, no difficulty whatsover is anticipated in keeping the acquisition program well ahead of construction requirements, as the right of way organization has been expanded and geared to an average yearly program of approximately $32,000,000 value and a volume of around 4,000 parcels.

The 1948-49 Fiscal Year represented the first full year of operation in which negotiations were carried on with public bodies, publicly owned public utilities, and privately owned public utilities, under the terms and conditions of the Collier-Burns Highway Act of 1947. During this period 217 utility agreements were consummated representing direct payments of $698,200, plus additional obligations assumed and yet to be paid in the amount of $1,286,100.

Of the total, $985,000+ represents payment where the utility had prior rights and the State would have had to assume the obligation regardless of the terms of the Collier-Burns Highway Act.

$4,780+ covers payment in cases where utility was removed to a new location outside of the freeway right of way.

$593,205 was for publicly-owned utilities originally located on a street not a state highway.

$286,700 covered privately-owned utilities not required to move under franchise provisions on account of freeway.

$106,615 for relocation of sewers, fire hydrants, street lighting facilities, etc., relocated in connection with freeway construction.

$3,340 for relocation of sewers, fire hydrants, street lighting facilities, etc., to clear right of way on other than freeways.

$4,437 covering second move in ten years on account of freeway.

$180 temporary move, State's obligation, Section 680, Streets and Highways Code.

It is interesting to note that the 1948-49 Fiscal Year acquisition by the Right of Way staff represents over double the total volume of work ever handled by any state highway right of way organization up to this time.

LEGAL

The difficulty in securing additional personnel required to meet the expansion of the Division of Highways right of way acquisition and construction program lessened during the year. It became possible to secure new men, and a considerable amount of expansion took place in each of the three legal offices.

One of the most significant decisions handed down during the year was a judgment by Judge James L. Atteridge of the Superior Court in and for the County of Santa Cruz, sitting on assignment by the Judicial Council as Judge of the Superior Court in and for the County of Santa Clara. The case, *City of San Jose* v. *C. H. Purcell, Director of Public Works and G. T. McCoy, State Highway Engineer,* No. 70666, Superior Court, Santa Clara County, was an action to enjoin the defendant Director of Public Works and State Highway Engineer from proceeding with the acquisition of right of way or other work looking toward the construction of State Highway Route 5 as relocated by the California Highway Commission through the City of San Jose. It was contended by the plaintiff that any work on the relocated line was prohibited by an initiative ordinance adopted by the electors of the City of San Jose requiring all freeway agreements with the city to be submitted to the voters before becoming effective. The ordinance also purported to rescind all such freeway agreements previously entered into between the city and the state, including the freeway agreement for relocating Route 5. It was contended that the initiative procedure specified in the charter controlled over the general state law.

In a long and carefully reasoned opinion Judge Atteridge held that the state highway through the City of San Jose is more than a municipal affair, being a matter in which all of the State is interested.

The judge also held that the city council in entering into a freeway agreement acts not as a mere agent or officer of the city but instead as a state agency deriving its authorization to contract from the State.

The contention that a special rule of law pertained as to freeways was disposed of by the judge's statement: "all freeways so located are state highways, but not all state highways are freeways."

The decision in the San Jose case was not appealed and has become final. We confidently expect that the well reasoned opinion of Judge Atteridge, one of the oldest, in point of service, and most distinguished jurists on our superior court, will be highly persuasive if similar controversies develop in other counties.

During the year the decision in the case of *People* v. *Al G. Smith,* 86 A. C. A. 330 became final. This was a condemnation proceeding involving the taking of access rights along approximately 2,000 feet of frontage on the state highway near El Centro. The purpose of the proceeding was to limit access to three specified openings over this distance. The case made by the defendant was that the property would be greatly damaged by reason of the taking of the access rights, whereas the plaintiff's witnesses testified that it would be worth as much as before. The jury

found that the damage which would accrue to the property "is $ None". This verdict was upheld on appeal, the court holding that while the right of access is property which cannot be taken or damaged without due compensation the jury's decision on the conflicting evidence was final, and that there was no point of law to be considered on the appeal as to access.

The verdict of the jury of no damages for the taking of access in the *Smith* case is only one of a number of such verdicts which have been secured. For example, in one such case, the jury not only brought in a verdict of no damages but also found benefits in the amount of $2,500. The reaction of juries generally to the large claims made for the taking of access rights has been most encouraging. These verdicts also indicate that our trial men in the field have been diligent in developing tactics, legal theories and procedures to meet such claims.

The case of *People* v. *Al G. Smith Co., Ltd.* (supra), also settled another important principle in condemnation law. The owner produced a building contractor as a witness to testify to the cost of constructing a 25-foot roadway on his property inside the fence line as a substitute for the access rights taken. The trial court held this offered evidence inadmissible. This was affirmed on appeal, the court holding that market value is the measure of compensation in eminent domain proceedings and that to allow both the market value to be given and independent proof of construction costs would be to confuse the jury and make possible an improper recovery of damages.

The Supreme Court of California, on August 13, 1948, decided the appeal of the defendant in *People* v. *Ocean Shore Railroad, Inc.* (32 Cal. (2d) 406). The opinion is very lengthy and covers numerous points of law. The actual decision of the court was to affirm the order of the Superior Court of Alameda County granting a new trial to the plaintiff after an exceedingly high jury verdict. The court specifically rejected the defendant's argument that it should have been permitted to prove the reproduction cost plus depreciation of the old railroad roadbed. The court held that the proper measure of damage is not the market value of the land plus reproduction cost of improvements, but the market value of the property as improved in view of all the uses to which it is adapted and available.

The case of *Holman* v. *State of California,* No. 48726, Superior Court of Kern County, involves the right of an abutting property owner to compensation for damages alleged to have been sustained by the construction of a central dividing strip. The trial court, on demurrer, entered judgment dismissing the case, holding that such damages are noncompensable. The plaintiff property owner has appealed, so we can look forward to an express decision on this important point of law.

The volume of condemnation work is indicated by the fact that judgment awards in condemnation proceedings handled by the Los Angeles office during the year total $1,203,038.80. It should be pointed out here that such figures as are quoted, as well as the figures issued from time to time by the Right of Way Department, as to number of cases tried, do not correctly, or at all, reflect the large number of cases which are settled before trial as a result of the work done by the Legal and Right of Way Departments in preparing for trials.

The volume of condemnation work is also indicated by the fact that during the year the San Francisco office did work in connection with 186 condemnation proceedings, involving 2,014 parcels of land and 4,683 named defendants.

The number of claims before the Board of Control approximately doubled during the year. There were a total of 114 claims in which demands against the State totaled more than $2,250,000. Eighty-one of these have been acted upon by the board, with a total allowance of $6,540.88.

Increased activity in claims has a direct relationship to the increased highway construction and state building program. Much of the legal work arising out of the construction program comes after construction is completed. For this reason it is believed that the full impact of the enlarged state construction programs has not as yet been experienced. Plans are being made accordingly, to recruit when possible additional lawyers in the junior and assistant counsel classes.

ACCOUNTING

EXPENDITURES REACH ALL-TIME HIGH

Expenditures of the Division of Highways for the fiscal year ending June 30, 1949, amounted to $165,311,661 compared with the previous all time high of $124,479,423 for the fiscal year ending June 30, 1948. Revenues for the year amounted to $159,245,450. The excess of expenditures over revenues constitutes a reduction of resources accumulated prior to July 1, 1948.

CASH RESOURCES VERSUS OBLIGATIONS

On June 30, 1949, the cash balance in the State Highway Fund, less approved claims not yet paid by the State Controller, was $37,312,-962. Of this amount $8,081,953 was in the form of deposits or transfers from other state funds for particular projects which are not a part of the regular state highway program, $755,293 represented cash on hand to meet obligations in connection with the county highway program and $4,378,328 represented the unexpended balance of funds available for expenditure on city streets, in accordance with Section 194 of the Streets and Highways Code. Cash resources available to meet obligations of the regular state highway program, therefore, amounted to $24,097,388. As of the same date, June 30, 1949, there were obligations outstanding in the form of going construction projects amounting to $51,476,072. Of this amount, $22,507,969 represented contracts relating to projects of the 1949-50 fiscal year which had been awarded prior to June 30, 1949, in accordance with the provisions of Section 143.1 of the Streets and Highways Code.

MOTOR VEHICLE FEE APPORTIONMENT REVISED

Section 781 of the Vehicle Code was amended by Chapter 20, Statutes of 1949, to provide that transfers to the Highway Users Tax Fund from the Motor Vehicle Fund shall be made quarterly instead of annually. Since the act carried an emergency clause, its provisions became effective immediately and, as a result, a transfer was made to the Highway Users Tax Fund and from that fund to the State Highway Fund in May covering collections for the first quarter of 1949. The amount involved was $14,000,000. Since this legislation had not been anticipated in preparing the budget for the 1948-49 Fiscal Year, the transfer of such a large amount so late in the fiscal year had the effect of making the cash balance in the State Highway Fund as of June 30, 1949, larger than would otherwise have been the case. The amendment will provide a more even flow of revenues into the State Highway Fund and will enable the division to program expenditures to more closely approximate cash resources as they become available.

ACCOUNTING AND FINANCIAL STATEMENTS

Included as Appendix A of this report are statements reflecting the financial condition of the Division of Highways as of June 30, 1948, and tables classifying revenues and expenditures to date and for the year ending June 30, 1949.

APPENDIX A

ACCOUNTING AND FINANCIAL STATEMENTS

1. Statement of Financial Condition as of June 30, 1949.
2. Statement of Receipts and Disbursements and Budgetary Resources and Obligations, July 1, 1948 to June 30, 1949.
3. Analysis of Income Received by Division of Highways by Fiscal Years to June 30, 1949.
4. Analysis of Federal Government Funds Received by Division of Highways by Fiscal Years to June 30, 1949.
5. Expenditures by Division of Highways to June 30, 1949, Classified as to Function.
6. Expenditure by Division of Highways by Fiscal Years to June 30, 1949, Classified as to Location and Purpose.
7. Statement of Expenditures in Counties for Construction, Reconstruction, Improvements, and Maintenance and Contributions Received in Connection therewith, January 1, 1912 to June 30, 1949.
8. Statements of Budgetary Transactions as of June 30, 1949:
   (a) State Highway Operating Budget—1949-1950 Fiscal Year.
   (b) State Highway Operating Budget—1948-1949 Fiscal Year.
   (c) State Highway Operating Budget—1947-1948 Fiscal Year.
   (d) County Highway Budget—1949-1950 Fiscal Year.
   (e) County Highway Budget—Prior.
   (f) Access Highways Budget.
   (g) Grade Separations Operating Budget.

STATEMENT OF FINANCIAL CONDITION AS OF JUNE 30, 1949

Assets and Budget Resources

Cash:		
Cash state	$893,656 84	
Cash suspense	29,210 42	
Revolving fund	2,500,000 00	
	$3,422,867 26	
Less advance to Convict Camp Fund	70,000 00	$3,352,867 26
State Highway Fund:		
In treasury	$37,312,961 74	
Warrants receivable	8,729,402 17	46,042,363 91
Toll Bridge Authority Revolving Fund:		
In treasury	$1,097 22	
Reimbursable expenditures	48,902 78	50,000 00
Advance to Convict Camp Fund		70,000 00
Court deposits in condemnation proceedings		2,579,441 51
Receivables:		
Accounts receivable	$907,834 16	
Charges in process of billing	139,526 16	
War damage claims	1,088,792 73	2,136,153 05
Loan to California Toll Bridge Authority, Chapters 5 and 24, Statutes 1933		6,288,550 41
Inventories:		
Stores-Equipment Department	$524,954 41	
Unapplied materials—districts	940,742 41	
Unapplied materials—warehouses	1,172,005 80	2,637,702 62
Land and buildings		7,573,551 56
Equipment:		
Construction and automotive	$13,121,741 16	
Less reserve for depreciation	5,606,717 50	
	$7,515,023 66	
Office, shop, and miscellaneous	2,802,231 90	10,317,255 56
Suspense and deferred items:		
Building operation suspense	$—12,206 48	
Equipment operation suspense	113,624 46	
Clearing account	434,557 43	
Unapplied laboratory charges	51,384 90	
Equipment department current account	574,262 42	
Advance to Architectural Revolving Fund	1,800 00	
Prepaid Bay Bridge insurance	244,533 54	
Undistributed payrolls	93,247 10	
Staff payroll adjustment	22,157 80	
Construction sign suspense	20,500 20	1,543,861 37
Estimated revenue:		
Federal aid—		
In process of collection	$3,368,755 50	
Under agreement	13,043,702 92	
Work programmed and agreements pending	14,447,356 17	
Work to be programmed	4,883,434 14	
Total federal aid	$35,743,248 73	
Highway Users tax	131,300,000 00	
Outdoor Advertising fees	60,000 00	
Work for other State agencies	995,307 89	*168,098,556 62
Total assets and budget resources		$250,690,303 87

* Includes Federal Aid of $19,837,138, Highway Users Tax Revenue of $131,300,000, and Outdoor Advertising Fees of $60,000 applying to the 1949-1950 Fiscal Year State Highway and County Highway budgets. Budget for the 1949-1950 Fiscal Year taken into account as of April 1 in order to permit awarding of construction contracts as authorized by Section 143.1 of the Streets and Highways Code.

STATEMENT OF FINANCIAL CONDITION AS OF JUNE 30, 1949—Continued

Liabilities, Reserves, Budget Obligations, and Surplus

Liablities:		
Schedules payable	$8,729,402 17	
Invoice pending—shops	18,949 20	
Sales tax collected	4,898 01	
Estimated liability for support of other departments	264,801 76	
Retirement contributions due	162,932 98	$9,180,984 12
Reserves for:		
Compensation insurance, vacation and sick leave, overtime	$951,668 29	
Major engineering equipment repairs	26,633 10	
Loan to California Toll Bridge Authority, Chapters 5 and 24, Statutes 1933	6,288,550 41	7,266,851 80
Deferred items:		
Uncollected damage claims	$13,986 19	
Uncollected contributions	639,795 42	
Uncollected war damage claims	1,088,792 73	
Uncleared collections	893,656 84	
Cash suspense	29,210 42	
Prado Dam deposit	27,499 39	
Windy Point Dam deposit, Chapter 19/1947	2,418,000 00	
Golden Gate Bridge Approach deposit, Chapter 1505/45	4,959,399 60	10,070,340 59
State's investment in capital assets		17,890,807 12
Budget allocations:		
Liability for uncompleted State highway budget contracts	$46,211,093 48	
Liability for uncompleted special budget contracts	4,937,670 54	
Encumbrances for operating functions, engineering, and maintenance	25,851,731 30	
Total encumbrances	$77,000,495 32	
Budget allotments unencumbered	116,925,930 02	*193,926,425 34
Estimated unbudgeted surplus		†12,354,894 90
Total liabilities, reserves, budget obligations, and surplus		$250,690,303 87

Trust Group

Assets

Cash in banks:		
Withheld from contract payments to protect claims	$89,892 77	
Convict Camp Fund	23,319 90	
Prisoners' Trust Fund	15,652 83	
Securities held in trust	4,500 00	$133,365 50
Funds in State Treasury:		
Unclaimed trust moneys		1,553 54
Total assets		$134,919 04

Liabilities

Liability for:		
Amounts withheld from contracts	$94,392 77	
Convict Camp Fund	23,319 90	
Prisoners' Trust Fund	15,652 83	
Cancelled checks	1,553 54	
Total liabilities		$134,919 04

* Includes budget allotments of $122,213,328.22 and encumbrances of $43,245,227.28 relating to 1949-1950 fiscal year budgets.

† Unbudgeted surplus reduced $4,678,811 by Votes of Commission July 20, 1949 and August 17, 1949, giving effect to revision in estimate of revenue for the 1949-1950 fiscal year.

ANALYSIS OF INCOME RECEIVED BY DIVISION OF HIGHWAYS BY FISCAL YEAR TO JUNE 30, 1949

Fiscal year	Total annual revenue [a]	Federal Government reimbursements	Contributions	State General Fund appropriations [a]	1st, 2d, 3d, Highway Funds	Advertising license fees	Miscellaneous	Highway users tax revenue
1911-1912	$160,503 04			$6,933 33	$153,569 71			
1912-1913	1,255,693 94			20,800 00	1,234,893 94			
1913-1914	2,346,271 78			20,800 00	2,320,816 61			$4,655 17
1914-1915	6,719,658 93			20,800 00	6,503,743 60			195,115 33
1915-1916	7,566,984 05		$190,109 68	20,800 00	6,302,191 34			1,053,883 03
1916-1917	2,676,472 92		77,000 00	35,561 60	1,469,285 65			1,094,625 67
1917-1918	5,379,741 65	$59,571 76	265,008 30	24,458 08	4,505,421 24			525,282 27
1918-1919	7,601,610 83		79,988 27	267,688 68	5,512,231 91			1,741,701 97
1919-1920	8,491,726 26	526,612 01	20,014 48	20,800 00	6,000,000 00			1,924,299 77
1920-1921	9,132,386 08	1,297,200 85	257,584 66	20,800 00	5,122,000 00			2,434,800 57
1921-1922	24,140,339 40	1,925,603 19	55,693 85	128,300 00	19,012,550 00			3,018,192 36
1922-1923	13,269,702 28	2,969,295 33	128,352 00	370,800 00	6,016,200 00			3,785,054 95
1923-1924	18,257,769 70	2,683,093 33	612,738 63	316,600 00	7,000,000 00			7,645,337 74
1924-1925	16,484,482 53	3,371,711 00	495,935 09	1,065 86	3,181,500 00			9,434,270 58
1925-1926	14,778,797 79	3,287,067 83	375,733 09	181,121 75				10,934,875 12
1926-1927	15,331,219 89	2,978,864 97	170,663 91	10,000 00				12,171,691 01
1927-1928	23,814,918 60	2,434,125 74	562,702 94	1,079,094 52	[b]—222,160 50			19,961,155 90
1928-1929	28,678,423 23	3,443,873 79	297,505 18					24,937,044 26
1929-1930	31,500,983 35	3,931,822 91	418,785 58					27,150,374 86
1930-1931	32,500,095 88	4,493,802 63	369,022 47	[c]—207,926 44				27,845,197 22
1931-1932	32,186,234 92	7,205,767 53	173,425 77	20,000 00				24,787,041 62
1932-1933	34,502,696 49	7,108,490 62	180,484 51					27,213,721 36
1933-1934	33,271,262 63	6,298,332 79	293,995 95			$22,000 81		26,656,933 08
1934-1935	37,866,497 26	10,041,249 32	469,154 67			24,596 24	$6,573 55	27,324,923 48
1935-1936	39,908,589 73	9,550,349 23	486,915 31			25,763 17	15,180 45	29,830,381 57
1936-1937	49,483,583 41	16,571,766 51	—116,801 77			30,490 80	6,620 59	32,991,507 28
1937-1938	44,952,706 70	8,873,600 09	782,634 60			32,674 33	715 26	35,263,082 42
1938-1939	45,000,245 99	9,269,747 08	460,909 47			28,439 71	—632 95	35,241,782 68
1939-1940	44,338,155 41	6,152,641 50	297,202 34			32,976 79		37,855,334 78
1940-1941	48,841,753 86	7,877,834 54	1,462,901 21			34,652 96		39,466,365 15
1941-1942	50,993,637 06	5,635,224 61	654,882 26			34,343 55	3 23	44,669,183 41
1942-1943	53,719,278 04	15,346,517 40	867,935 21			27,661 44		37,477,163 99
1943-1944	58,417,281 65	10,864,032 89	484,758 31	13,520,000 00		27,055 05		33,521,435 40
1944-1945	39,141,969 64	4,693,307 39	85,298 12			29,234 68	66,366 75	34,267,762 70
1945-1946	64,885,373 90	4,574,012 34	5,207,950 33	12,000,000 00		31,916 20	235,731 77	42,835,763 26
1946-1947	76,693,102 06	19,069,697 28	1,943,481 04			43,565 74	254,698 49	55,381,659 51
1947-1948	107,258,065 59	25,855,041 17	—4,400,465 80	[c]—487 40		55,367 80	1,119,019 25	84,629,590 57
1948-1949	159,245,449 65	22,234,591 88	3,107,568 58	[c]—12,255 27		62,258 54	543,004 33	133,310,281 59
Totals	$1,290,793,666 12	$230,624,849 51	$16,819,068 24	$27,865,754 71	$74,112,243 50	$542,997 81	[e] $2,247,280 72	[d] $938,581,471 63

[a] Includes $275,733.33 paid direct by State Controller to State Highway Engineer and Highway Commissioners.
[b] Represents discount on bonds.
[c] Represents reduction of revenue due to reversion of appropriations.
[d] Does not include apportionment for quarter ending June 30, 1949, received July 1949—$22,221,403.97.
[e] Includes: Net earnings on investments $1,373,647.04.
Recoveries U.S. war damage claims 870,033.68.
Franchise tax—toll ferries 3,600.00.

ANALYSIS OF INCOME RECEIVED BY DIVISION OF HIGHWAYS BY FISCAL YEAR TO JUNE 30, 1949—Continued

Analysis of Highway Users Tax Revenue *

1947-1948 Fiscal Year		
I Motor Vehicle Fuel Taxes:		
Gasoline tax		$71,681,376 06
Use fuel tax		3,029,301 52
Miscellaneous		1,603 11
II Motor Vehicle Transportation Tax		4,826,958 30
III Caravan Fees		138,952 50
IV Motor Vehicle Registration and Weight Fees		7,751,399 08
Total apportionments		$87,429,590 57
Deduct: Disbursements by State Controller		
To State Controller-Section 2103.1	$100,000 00	
To Counties-Section 2104	2,700,000 00	
Net transfer to State Highway Fund		$84,629,590 57

1948-1949 Fiscal Year		
I Motor Vehicle Fuel Taxes:		
Gasoline tax		$85,576,141 32
Use fuel tax		3,734,754 09
Miscellaneous		71,164 97
II Motor Vehicle Transportation Tax		6,816,461 97
III Caravan Fees		—30 00
IV Motor Vehicle Registration and Weight Fees		43,303,477 91
Total apportionments		$139,501,970 26
Deduct: Disbursements by State Controller		
Contributions to State Retirement System	$1,976 29	
To State Controller-Section 2103.1	102,267 00	
To Counties-Section 2104	6,087,445 38	
Net transfer to State Highway Fund		$133,310,281 59

* For prior years see Second Annual Report.

Footnotes for Statement of Receipts and Disbursements on page 137

[a] Includes Federal Aid of $19,837,138, Highway Users Tax Revenue of $131,300,000, and Outdoor Advertising Fees of $60,000 applying to the 1949-1950 Fiscal Year State Highway and County Highway budgets. Budget for the 1949-1950 Fiscal Year taken into account as of April 1 in order to permit awarding of construction contracts as authorized by Section 143.1 of the Streets and Highways Code.

[b] Includes budget allotments of $122,213,328.22 and encumbrances of $43,245,227.28 relating to 1949-1950 Fiscal Year budgets.

[c] Unbudgeted surplus reduced $4,678,811 by Votes of Commission July 20, 1949 and August 17, 1949, giving effect to revision in estimate of revenue for the 1949-1950 Fiscal Year.

STATEMENT OF RECEIPTS AND DISBURSEMENTS AND BUDGETARY RESOURCES AND OBLIGATIONS

Excess of income over expenditures as of July 1, 1948		$38,515,371 96	
Suspense items, other assets, reserves		4,181,151 02	
Total resources as of July 1, 1948			$42,696,522 98
Receipts during year:			
Highway users tax revenue		$133,310,281 59	
Federal Government reimbursements		22,234,591 88	
Contributions		3,107,568 58	
Outdoor advertising license fees		62,258 54	
Net earnings on investments		323,664 47	
Recoveries—U. S. war damage claims		218,739 86	
Franchise tax—toll ferries		600 00	
State General Fund appropirations—reversion		—12,255 27	
Total income			159,245,449 65
Estimated revenue uncollected as of June 30, 1949:			
Federal Aid—			
In process of collection	$3,368,755 50		
Under agreement	13,043,702 92		
Work programmed and agreements pending	14,447,356 17		
Work to be programmed	4,883,434 14		
Total federal aid		$35,743,248 73	
Highway users tax		131,300,000 00	
Outdoor advertising license fees		60,000 00	
Work for other State agencies		995,307 89	
Total estimated revenue			[a]168,098,556 62
Total budgetary resources			$370,040,529 25
Expenditures during year:			
Regular budgets:			
Highway construction, north	$44,154,360 27		
Highway construction, south	54,731,042 74		
Cities ¼¢ state highways, north	1,625,727 49		
Cities ¼¢ state highways, south	3,486,285 49		
Joint highway district, north	112,000 00		
Maintenance	18,301,723 10		
Cities—city streets	22,518,387 52		
Highway planning	493,480 79		
Planning survey	386,489 42		
Work for other State agencies	466,043 84		
Legislative damage claims	3,414 01		
Supervision of outdoor advertising	57,979 41		
Plants and equipment	3,704,539 11		
Administration, State General Fund departments	415,169 16		
Administration, Department of Public Works	99,041 32		
Administration, Division of Highways	3,733,493 86		
Administration, Division of Contracts and Rights of Way	148,873 04		
Total regular budget expenditures		$154,438,050 57	
Special budgets:			
Highway construction, north	$491,925 19		
Highway construction, south	270,945 02		
Highway construction, feeder	590,657 23		
County highway construction	7,967,631 00		
Total special budget expenditures		$9,321,158 44	
Total expenditures during year			$163,759,209 01
Budgetary resources as of June 30, 1949:			
Excess of income over expenditures		$32,458,062 75	
Suspense items, other assets, reserves		5,724,700 87	
Estimated revenue not collected (above)		[a]168,098,556 62	206,281,320 24
Budgetary allocations:			
Budgetary allotments unencumbered		$116,925,930 02	
Budgetary encumbrances:			
Uncompleted State highway budget contracts	$46,211,093 48		
Uncompleted special budget contracts	4,937,670 54		
Operating functions, engineering, and maintenance	25,851,731 30	77,000,495 32	[b]193,926,425 34
Etsimated unbudgeted surplus June 30, 1949			[c]$12,354,894 90

Footnotes on page 136.

FEDERAL REIMBURSEMENTS

Analysis of Federal Government Funds Received by Division of Highways by Fiscal Years to June 30, 1949

Fiscal year	Total federal funds	On State System							
		Regular federal aid	Urban federal aid	Emergency and public works funds 1930-1935	Federal land projects	Emergency relief-floods 1938-1940	Strategic network	* Public works administration grants (PWA)	Advanced engineering
1917-1918	$59,571 76	$59,571 76							
1919-1920	526,612 01	526,612 01							
1920-1921	1,297,200 85	1,297,200 85							
1921-1922	1,925,603 19	1,925,603 19							
1922-1923	2,969,295 33	2,969,295 33							
1923-1924	2,683,093 33	2,683,093 33							
1924-1925	3,371,711 00	3,371,711 00							
1925-1926	3,287,067 83	3,287,067 83							
1926-1927	2,978,864 97	2,978,864 97							
1927-1928	2,434,125 74	2,434,125 74							
1928-1929	3,443,873 79	3,443,873 79							
1929-1930	3,931,822 91	3,931,822 91							
1930-1931	4,493,802 63	4,493,802 63							
1931-1932	7,205,767 53	4,196,940 18		$3,008,827 35					
1932-1933	7,108,490 62	3,744,429 15		3,364,061 47					
1933-1934	6,298,332 79	654,740 26		5,643,592 53					
1934-1935	10,041,249 32	32,971 95		9,792,386 75	$215,890 62				
1935-1936	9,550,349 23	633,045 90		7,517,308 18	79,493 05				
1936-1937	16,571,766 51	4,911,042 70		1,294,076 85	204,262 50				
1937-1938	8,873,600 09	5,454,817 96		556,805 34	131,892 00				
1938-1939	9,269,747 08	4,470,223 49		14,264 76	63,097 00	$867,830 00		$757,270 00	
1939-1940	6,152,641 50	3,214,413 47		24,252 12	164,324 00	598,791 74		75,718 41	
1940-1941	7,877,834 54	5,512,786 00			179,889 66	316,189 64		178,514 75	
1941-1942	5,635,224 61	3,896,659 66			29,922 66	159,392 86			
1942-1943	15,346,517 40	3,258,650 78			15,154 07	17,285 76	$246,602 00		
1943-1944	10,864,032 89	1,575,411 24					643,034 58		
1944-1945	4,693,307 39	464,102 88					95,742 64		
1945-1946	4,574,012 34	529,544 49					424,856 00		$86,366 00
1946-1947	19,069,697 28	8,151,245 04	$3,754,386 02				884,473 95		107,102 00
1947-1948	25,855,041 17	9,791,511 38	8,148,358 78		38,492 00		3,851 83		36,733 00
1948-1949	22,234,591 88	7,502,294 48	8,976,998 00		31,390 39		26,676 00		26,644 00
Totals	$230,624,849 51	$101,397,476 35	$20,879,742 80	$31,215,575 35	$1,153,807 95	$1,959,490 00	$2,325,237 00	$1,011,503 16	$256,845 00

FEDERAL REIMBURSEMENTS—Continued

Analysis of Federal Government Funds Received by Division of Highways by Fiscal Years to June 30, 1949

Fiscal year	On and Off State System					Nonhighway work flight strips
	Works program fund		Federal aid secondary		Access highways	
	Highways	Grade crossings	Highways	Grade crossings		
1917-1918						
1919-1920						
1920-1921						
1921-1922						
1922-1923						
1923-1924						
1924-1925						
1925-1926						
1926-1927						
1927-1928						
1928-1929						
1929-1930						
1930-1931						
1931-1932						
1932-1933						
1933-1934						
1934-1935						
1935-1936	$910,380 15	$410,121 95				
1936-1937	5,463,326 35	4,699,058 11				
1937-1938	1,124,193 09	1,216,584 62	$64,007 00	$325,300 08		
1938-1939	208,140 48	820,926 39	1,023,264 04	1,044,730 92		
1939-1940	41,887 93	92,601 23	557,809 69	1,382,842 91		
1940-1941		217,260 60	662,134 56	811,059 33		
1941-1942		29,809 10	682,747 18	836,693 15		
1942-1943			128,426 34	202,680 44	$10,459,716 01	$1,018,002 00
1943-1944			382,192 37	190,571 67	7,267,253 03	805,570 00
1944-1945			137,759 91	76,124 90	3,746,648 89	172,928 17
1945-1946			152,047 15	378,003 20	2,822,599 39	180,596 11
1946-1947			1,131,589 87	88,251 57	4,884,449 01	68,199 82
1947-1948			4,698,345 85	322,764 16	2,814,954 82	29 35
1948-1949			3,951,618 98	1,004,887 13	714,082 90	
Totals	$7,747,928 00	$7,486,362 00	$13,571,942 94	$6,663,909 46	$32,709,704 05	$2,245,325 45

* Includes PWA grants in the amount of $164,572.52 accounted as "Contributions" in Ledger accounts.

EXPENDITURES BY DIVISION OF HIGHWAYS TO JUNE 30, 1949

Classified as to Functions

Item	Totals to June 30, 1949		July 1, 1948-June 30, 1949		July 1, 1947-June 30, 1948		July 1, 1946-June 30, 1947	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Preliminary engineering	$36,788,180 59	2.92	$5,462,960 84	3.30	$3,563,337 31	2.86	$2,854,510 81	3.14
Construction engineering—day labor			150,033 16	.09	102,499 14	.08	101,328 37	.11
Construction engineering—contracts			6,243,052 74	3.78	5,150,730 54	4.14	3,876,767 52	4.27
Construction engineering—total	47,356,519 41	3.76						
Right of way	105,842,381 73	8.41	26,366,758 76	15.95	14,998,513 06	12.05	8,744,908 70	9.63
Construction and improvement work—day labor	117,359,756 30	9.33	4,419,077 23	2.67	3,668,755 15	2.95	3,357,897 17	3.70
Construction and improvement work—contracts	518,888,949 52	41.24	65,564,678 72	39.66	55,071,632 22	44.24	42,083,638 48	46.36
Joint highway districts	3,541,483 92	.28	112,000 00	.07	73,030 10	.06	150,000 00	.17
Cities ¼ cent state highways—construction	43,261,705 52	3.44	5,075,459 40	3.08	5,574,013 72	4.48	3,920,505 15	4.32
Totals, construction and improvements	$873,038,976 99	69.38	$113,394,020 85	68.60	$88,202,511 24	70.86	$65,089,556 20	71.70
Aid to counties	$25,000 00							
Flight strip construction	2,245,325 45	.18			$—64 24		$—1,210 22	
County postwar projects	1,499,512 60	.12					39,354 39	.04
Work for other agencies	1,483,740 70	.12	$466,043 84	.28	310,006 55	.25		
Maintenance	221,899,064 28	17.63	18,301,723 10	11.07	15,617,718 55	12.55	11,877,566 30	13.09
Cities ¼ cent state highways—maintenance	9,690,075 87	.77	36,553 58	.02	711,582 15	.57	889,304 95	.98
City streets (Section 194, S. & H. Code)	74,480,175 08	5.92	22,518,387 52	13.62	8,102,917 93	6.51	6,167,590 59	6.79
Damage claims paid	67,379 68	.01	3,414 01		10,722 58	.01		
Highway planning	2,420,272 55	.19	493,480 79	.30	431,154 60	.35	237,089 38	.26
Planning survey	2,570,707 23	.20	386,489 42	.24	366,644 30	.29	339,693 64	.37
Supervision of outdoor advertising	530,006 21	.04	57,979 41	.04	55,593 72	.04	41,677 70	.05
Plants and equipment	17,809,158 08	1.42	3,704,539 11	2.24	6,166,393 96	4.96	2,546,797 00	2.81
Reserves and suspense	5,724,700 87	.45	1,552,452 63	.94	578,606 69	.46	581,476 63	.64
Totals, maintenance, special activities, miscellaneous	$340,445,118 60	27.05	$47,521,063 41	28.75	$32,351,276 79	25.99	$22,719,340 36	25.03
Administrative expense—								
At district offices	$21,330,515 19	1.69	$1,943,382 98	1.17	$2,055,005 99	1.65	$1,420,220 33	1.57
At headquarters office	17,249,954 31	1.37	1,790,110 88	1.08	1,312,744 43	1.05	1,062,070 95	1.17
Division of contracts and rights of way	723,360 90	.06	148,873 04	.09	125,613 07	.10	93,896 24	.10
Department of Public Works	1,155,590 59	.10	99,041 32	.06	85,987 11	.07	68,541 91	.07
Other state departments	4,108,608 73	.33	415,169 16	.25	346,266 90	.28	324,244 48	.36
Paid direct by State Controller	275,733 33	.02						
Federal—nonhighway	7,744 73				17 10		300 34	
Total administration	$44,851,507 78	3.57	$4,396,577 38	2.65	$3,925,634 60	3.15	$2,969,274 25	3.27
Grand totals	$1,258,335,603 37	100.00	$165,311,661 64	100.00	$124,479,422 63	100.00	$90,778,170 81	100.00

EXPENDITURES BY DIVISION OF HIGHWAYS TO JUNE 30, 1949—Continued

Classified as to Functions

Item	July 1, 1945-June 30, 1946		July 1, 1944-June 30, 1945		March 1, 1912-June 30, 1944	
	Amount	Percent	Amount	Percent	Amount	Percent
Preliminary engineering	$2,099,262 94	4.58	$1,780,828 24	5.21	$21,027,280 45	2.64
Construction engineering—day labor	66,455 45	.14	46,492 60	.14		
Construction engineering—contracts	1,345,613 44	2.94	658,638 72	1.92		
Construction engineering—total					29,614,907 73	3.72
Right of way	6,735,981 40	14.70	6,514,767 50	19.06	42,481,452 31	5.33
Construction and improvement work—day labor	2,242,403 53	4.89	1,748,600 42	5.11	101,923,022 80	12.77
Construction and improvement work—contracts	11,130,177 57	24.28	6,898,199 22	20.18	338,140,623 31	42.39
Joint highway districts			26,667 00	.08	3,179,786 82	.39
Cities ¼ cent state highways—construction	2,343,053 76	5.11	970,283 06	2.84	25,378,390 43	3.18
Totals, construction and improvements	$25,962,948 09	56.64	$18,644,476 76	54.54	$561,745,463 85	70.42
Aid to counties					$25,000 00	
Flight strip construction	$17,275 49	.04	$31,995 08	.09	2,197,329 34	.28
County postwar projects	134,438 62	.30	713,638 93	2.09	612,080 66	.08
Work for other agencies					707,690 31	.09
Maintenance	11,335,460 96	24.73	9,547,486 42	27.93	155,219,108 95	19.45
Cities ¼ cent state highways—maintenance	811,681 91	1.77	695,483 65	2.04	6,545,469 63	.81
City streets (Section 194, S. & H. Code)	3,531,600 44	7.70	2,449,076 87	7.16	31,710,601 73	3.98
Damage claims paid	773 23				52,469 86	.01
Highway planning	204,164 22	.45	172,641 34	.50	881,742 22	.11
Planning survey	132,829 33	.29	88,703 28	.26	1,256,347 26	.16
Supervision of outdoor advertising	34,106 88	.07	29,669 50	.09	310,979 00	.04
Plants and equipment	510,463 68	1.11	—218,378 17	—.65	5,099,342 50	.64
Reserves and suspense	769,213 97	1.68	270,643 37	.80	1,972,307 58	.25
Totals, maintenance, special activities, miscellaneous	$17,482,008 73	38.14	$13,780,960 27	40.31	$206,590,469 04	25.90
Administration expense—						
At district offices	$1,161,086 02	2.53	$933,083 36	2.73	$13,817,736 51	1.73
At headquarters office	911,862 95	1.99	695,080 88	2.03	11,478,084 22	1.44
Division of contracts and rights of way	80,334 54	.18	69,141 23	.21	205,502 78	.03
Department of Public Works	67,687 82	.15	65,910 42	.19	768,422 01	.09
Other state departments	167,864 39	.37	—9,811 04	—.03	2,864,874 84	.36
Paid direct by State Controller					275,733 33	.03
Federal—nonhighway	1,648 75		5,778 54	.02		
Total administration	$2,390,484 47	5.22	$1,759,183 39	5.15	$29,410,353 69	3.68
Grand totals	$45,835,441 29	100.00	$34,184,620 42	100.00	$797,746,286 58	100.00

EXPENDITURES BY DIVISION OF HIGHWAYS BY FISCAL YEARS TO JUNE 30, 1949

Classified as to Location and Purpose

Fiscal year	Total annual expenditures	Expenditures on Highways					
		Construction—Reconstruction—Improvements (Includes right of way and engineering)				Maintenance	
		On State system		Off State system		On State system	
		Rural	Incorporated cities [a]	Rural	Incorporated cities	Rural	Incorporated cities [a]
1912-1922	$68,361,014 24	$58,325,400 50				$6,054,750 20	
1922-1923	18,181,744 42	14,624,956 92				2,077,224 82	
1923-1924	16,475,994 29	12,034,358 88				2,639,929 64	
1924-1925	15,813,595 38	11,942,581 96				3,177,066 68	
1925-1926	16,064,960 01	11,568,911 25				3,426,747 56	
1926-1927	15,983,286 87	10,353,680 23				5,656,244 73	
1927-1928	15,886,156 89	10,075,388 80				4,462,993 83	
1928-1929	25,473,504 47	19,353,930 87				4,926,454 10	
1929-1930	33,144,154 41	25,192,676 42				6,752,845 54	
1930-1931	32,301,209 22	25,289,922 75				5,678,964 43	
1931-1932	35,162,149 64	26,465,989 16				6,843,801 35	
1932-1933	32,892,832 02	25,723,627 17				5,798,548 59	
1933-1934	37,309,610 00	23,634,467 29	$4,406,115 40			6,933,895 17	$151,403 38
1934-1935	36,950,873 25	19,559,413 58	7,473,071 99			7,817,668 74	390,096 65
1935-1936	39,998,463 64	17,220,992 91	8,114,562 63	$1,340,924 75	$498,741 39	8,106,234 39	344,152 88
1936-1937	53,022,109 28	28,241,432 35	7,856,292 69	1,117,987 66	1,206,225 53	8,242,656 83	585,831 87
1937-1938	45,518,395 91	20,951,839 87	5,668,787 73	480,283 56	83,180 09	10,660,911 63	815,667 77
1938-1939	41,559,637 90	18,879,954 23	6,134,917 22	951,170 21	129,799 77	8,257,630 52	790,433 54
1939-1940	40,884,541 39	14,866,211 88	8,659,388 88	280,213 25	392,268 37	9,264,715 07	806,731 17
1940-1941	44,482,441 20	18,403,813 63	6,827,184 43	355,928 77	368,231 99	10,411,642 26	868,571 11
1941-1942	47,029,403 90	17,686,161 65	8,064,636 76	819,089 41	488,372 28	10,829,238 19	770,802 67
1942-1943	45,621,190 83	14,814,712 06	7,260,185 09	5,985,291 10	2,440,393 67	7,969,320 59	630,487 03
1943-1944	39,629,017 42	13,623,886 72	6,434,973 41	2,699,216 90	1,973,586 34	8,942,213 48	678,702 17
1944-1945	34,184,620 42	9,602,452 14	6,719,379 61	1,015,462 95	1,211,153 18	9,517,678 37	725,291 70
1945-1946	45,835,441 29	17,436,547 94	7,306,222 38	366,529 44	769,929 16	11,315,872 43	831,270 44
1946-1947	90,778,170 81	38,247,032 89	21,235,659 32	2,956,086 33	2,223,875 42	11,841,138 56	925,732 69
1947-1948	124,479,422 63	43,701,075 48	33,898,980 94	8,895,364 24	1,338,983 42	14,666,448 44	1,662,852 26
1948-1949	165,311,661 64	60,553,256 77	44,259,366 15	7,604,029 80	584,757 42	15,724,397 17	2,613,879 51
Totals	$1,258,335,603 37	$628,374,676 30	$190,319,724 63	$34,867,578 37	$13,709,498 03	$217,997,233 31	$13,591,906 84

EXPENDITURES BY DIVISION OF HIGHWAYS BY FISCAL YEARS TO JUNE 30, 1949—Continued

Classified as to Location and Purpose

Fiscal year	Expenditures on Highways		Administration special investigations and highway planning survey	Equipment, plants, reserves, suspense and miscellaneous	Supervision of outdoor advertising	Flight strip construction
	Subventions to counties [b]	Subventions to cities [c]				
1912-1922			$1,280,938 17	$2,699,925 37		
1922-1923	$50,000 00		790,685 95	638,876 73		
1923-1924			765,139 85	1,036,565 92		
1924-1925	100,701 59		747,845 54	—154,600 39		
1925-1926	50,000 00		707,189 22	312,111 98		
1926-1927	50,000 00		819,675 49	—896,313 58		
1927-1928	75,000 00		850,542 37	422,231 89		
1928-1929	80,000 00		997,208 42	115,911 08		
1929-1930	336,280 00		1,066,796 62	—204,444 17		
1930-1931	411,449 86		1,050,133 14	—129,260 96		
1931-1932	339,223 20		1,086,879 08	426,256 85		
1932-1933	62,560 10		1,100,206 71	207,889 45		
1933-1934	663,574 94		1,196,685 82	305,575 75	$17,892 25	
1934-1935	16,840 85		1,432,696 29	233,108 91	27,976 24	
1935-1936	158,722 14	$1,902,631 42	1,308,224 36	983,360 91	19,915 86	
1936-1937	100,000 00	3,587,123 05	1,935,760 95	119,403 55	29,394 80	
1937-1938	201,338 64	4,000,269 75	1,865,727 42	758,014 05	32,375 40	
1938-1939	25,765 86	4,081,769 62	1,809,589 34	465,054 96	33,552 63	
1939-1940	43,000 00	4,225,718 94	1,873,339 46	442,411 28	30,543 09	
1940-1941	148,583 00	4,445,932 35	2,225,063 14	396,757 11	30,733 41	
1941-1942	127,589 00	4,609,321 49	2,302,842 51	1,259,971 07	33,409 44	$37,969 43
1942-1943	142,935 33	3,287,591 87	2,213,377 30	—812,284 92	26,855 64	1,662,326 07
1943-1944	633,302 97	2,790,587 92	2,121,896 02	—794,712 59	28,330 24	497,033 84
1944-1945	740,305 93	2,518,438 75	2,020,528 01	52,265 20	29,669 50	31,995 08
1945-1946	134,438 62	3,615,319 61	2,727,478 02	1,280,450 88	34,106 88	17,275 49
1946-1947	189,354 39	6,444,492 83	3,546,057 27	3,128,273 63	41,677 70	—1,210 22
1947-1948	73,030 10	8,397,994 99	4,723,433 50	7,065,729 78	55,593 72	—64 24
1948-1949	112,000 00	22,798,998 23	5,276,547 59	5,726,449 59	57,979 41	
Totals	$5,065,996 52	$76,706,190 82	$49,842,487 56	$25,084,979 33	$530,006 21	$2,245,325 45

[a] Includes Cities ¼ cent State Highway Funds.
[b] Includes Joint Highway Districts, County Postwar Projects and Aid to Counties.
[c] Includes Cities—City Street Funds and Cities ¼ cent State Highway Funds.

STATEMENT OF EXPENDITURES IN COUNTIES FOR CONSTRUCTION, RECONSTRUCTION, IMPROVEMENTS, AND MAINTENANCE AND CONTRIBUTIONS RECEIVED IN CONNECTION THEREWITH, JANUARY 1, 1912, TO JUNE 30, 1949

(Expenditures Shown Include Expenditures of Contributions Received From Counties and Others and Expenditures in Joint Highway Districts But Exclude City Gasoline Tax Expenditures)

County	Construction, Reconstruction, Improvements				Maintenance Expenditures	
	Expenditures		Contributions			
	48-49 fiscal year July 1, 1948 June 30, 1949	Totals January 1, 1912 June 30, 1949	48-49 fiscal year July 1, 1948 June 30, 1949	Totals January 1, 1912 June 30, 1949	48-49 fiscal year July 1, 1948 June 30, 1949	Totals January 1, 1912 June 30, 1949
Alameda	$6,218,524 07	$35,391,391 08	$49,967 82	$230,466 83	$509,558 91	$3,049,379 89
Alpine	22,363 52	767,850 60	2,000 00	2,000 00	67,724 24	1,192,531 12
Amador	365,211 07	3,201,675 68	92 51	4,973 46	155,724 94	2,396,809 82
Butte	433,703 20	7,547,654 92	60,465 87	133,893 23	209,488 15	3,005,080 00
Calaveras	215,973 51	3,042,083 74		102,361 10	157,254 65	2,181,839 14
Colusa	58,591 44	3,941,282 98		70,101 07	76,700 20	1,495,755 17
Contra Costa	1,277,168 21	12,978,944 03	35,461 56	78,908 26	341,821 26	2,719,600 82
Del Norte	422,792 30	8,332,286 94	—205 53	29,844 47	269,577 45	3,655,534 49
El Dorado	214,134 62	4,577,111 36		8,599 70	290,806 17	3,625,137 33
Fresno	2,316,396 69	16,447,925 63	167 22	82,595 01	349,273 05	3,708,667 23
Glenn	486,367 49	3,798,078 65	4,000 00	123,571 60	64,430 41	1,275,797 51
Humboldt	1,547,674 91	19,519,353 42	208,892 59	544,355 33	700,187 37	9,508,425 82
Imperial	1,209,121 65	17,604,934 48		124,304 19	217,031 94	4,029,125 21
Inyo	371,443 40	5,583,031 81		4,500 00	229,450 85	3,314,408 09
Kern	3,160,616 08	30,546,225 22	6,182 50	181,889 84	670,462 71	8,712,596 57
Kings	266,947 82	2,716,389 07		31,836 00	93,455 21	1,380,040 55
Lake	216,263 91	4,157,858 95		6,897 14	184,953 59	2,375,423 40
Lassen	308,149 79	6,409,089 95	19,272 39	230,680 16	287,761 54	2,952,103 38
Los Angeles	29,538,440 73	135,347,661 12	1,108,947 62	1,802,482 68	1,730,333 03	13,874,154 51
Madera	1,265,670 90	6,129,102 38	39,983 25	130,276 20	95,927 88	1,211,218 71
Marin	644,728 12	12,639,966 43		179,526 54	259,278 54	2,969,775 40
Mariposa	55,942 15	4,949,162 58		125,008 10	95,191 94	1,716,738 12
Mendocino	2,303,045 93	20,061,300 22	30,376 63	119,895 70	465,288 12	7,772,296 00
Merced	921,875 92	9,148,371 94	3,000 00	75,484 13	225,388 37	2,606,673 16
Modoc	469,037 99	4,889,060 96	1,000 00	148,298 60	245,704 76	2,425,059 46
Mono	327,308 34	5,432,020 17	199 80	199 80	337,408 17	4,440,188 80
Monterey	703,329 94	24,533,313 20	—629 58	147,522 61	358,745 90	5,125,842 02
Napa	718,650 96	4,000,313 61	5,400 00	123,116 66	183,825 52	1,906,947 50
Nevada	510,475 43	6,640,372 38		107,805 82	305,119 89	3,837,199 01
Orange	2,188,015 20	18,411,815 25	251 46	270,850 55	428,692 96	4,102,015 11
Placer	1,071,617 85	11,578,603 43		81,008 57	278,862 33	3,937,607 22
Plumas	945,171 77	7,874,162 11	1,500 00	95,155 15	265,282 44	3,315,963 31
Riverside	3,250,491 73	20,876,392 80	560,600 61	759,558 12	506,846 25	6,779,994 49
Sacramento	2,198,469 50	13,680,098 25		451,419 53	307,509 77	4,241,854 77
San Benito	149,055 63	3,481,029 55	3,000 00	73,909 52	74,261 09	1,154,520 92
San Bernardino	4,446,934 18	32,806,188 44	6,394 53	287,756 82	1,070,800 99	14,214,443 24
San Diego	4,501,092 71	42,379,912 06	32,118 57	1,205,914 88	646,214 44	6,458,848 11
San Francisco	6,107,563 47	19,396,973 43	153,429 68	296,328 80	128,860 80	258,188 09
San Joaquin	1,704,300 32	14,160,068 81		90,094 40	256,100 21	3,774,285 80
San Luis Obispo	2,377,736 32	16,121,812 69	1,495 02	82,756 84	411,259 72	4,644,808 11
San Mateo	2,122,459 93	27,070,759 47	145,654 50	2,868,038 29	344,428 40	4,040,242 51
Santa Barbara	2,839,366 25	24,086,892 89		191,180 54	339,672 94	4,576,156 50
Santa Clara	732,005 13	17,730,840 53	61,334 87	269,013 68	369,632 04	4,193,637 24
Santa Cruz	2,028,614 73	9,657,356 73		603,968 01	181,382 55	2,919,078 67
Shasta	2,005,011 82	20,663,915 57	11,800 00	1,925,715 15	417,637 51	5,867,066 52
Sierra	89,434 86	1,220,191 50	7,303 00	26,743 68	124,110 67	1,198,945 01
Siskiyou	823,706 72	11,474,593 42		126,719 48	372,908 88	5,152,733 45
Solano	3,493,768 76	17,611,764 10	—6,115 54	61,266 35	270,841 61	3,636,121 26
Sonoma	1,959,336 16	10,648,994 73	—1,556 91	153,772 45	387,035 26	4,542,459 20
Stanislaus	1,018,590 23	6,039,759 11	386 66	22,666 34	125,587 92	1,429,992 29
Sutter	256,602 10	3,166,325 24	684 49	50,179 63	42,392 11	663,638 94
Tehama	286,170 76	7,942,237 44		45,218 90	244,025 83	3,516,798 76
Trinity	509,736 29	7,053,367 22		12,680 00	301,573 01	2,623,746 03
Tulare	2,328,978 07	10,980,788 75	103,000 00	160,435 75	323,488 88	3,705,528 69
Tuolumne	157,378 55	2,362,749 06	400 00	13,797 18	210,878 67	3,216,396 59
Ventura	1,635,727 30	18,409,362 62		16,500 00	403,986 23	5,505,729 06
Yolo	337,446 88	7,851,629 50	38,617 17	82,664 39	255,712 63	2,862,812 76
Yuba	183,828 14	4,490,210 38	51,644 40	116,931 95	33,862 20	901,103 40
Totals	$108,318,561 45	$829,562,608 58	$2,746,517 16	$15,393,639 18	$18,301,723 10	$221,899,064 28

STATE HIGHWAY OPERATING BUDGET—1949-1950 FISCAL YEAR

Statement of Budgetary Transactions as of June 30, 1949 **

	From 1948-1949 fiscal year budget	Original budget	Budgetary adjustments	Adjusted budget	Expenditures authorized work orders	Unencumbered balance available
Preliminary engineering:						
North		$2,100,000 00		$2,100,000 00	$540,000 00	$1,560,000 00
South		2,400,000 00		2,400,000 00	806,000 00	1,594,000 00
Totals		$4,500,000 00		$4,500,000 00	$1,346,000 00	$3,154,000 00
Right of way:						
North		$5,879,500 00	$606,992 72	$6,486,492 72	$286 28	$6,486,206 44
South		11,822,000 00	2,307,067 24	14,129,067 24		14,129,067 24
Totals		$17,701,500 00	$2,914,059 96	$20,615,559 96	$286 28	$20,615,273 68
Construction engineering:						
North		$2,600,000 00		$2,600,000 00	$670,000 00	$1,930,000 00
South		2,600,000 00		2,600,000 00	825,000 00	1,775,000 00
Contributions—south			$150 00	150 00		150 00
Totals		$5,200,000 00	$150 00	$5,200,150 00	$1,495,000 00	$3,705,150 00
Construction projects:						
North		$31,319,000 00	$—517,154 88	$30,801,845 12	$16,446,797 85	$14,355,047 27
South		34,684,000 00	—2,032,628 44	32,651,371 56	6,327,476 04	26,323,895 52
Contributions—south			1,500 00	1,500 00	173,353 45	—171,853 45
Totals		$66,003,000 00	$—2,548,283 32	$63,454,716 68	$22,947,627 34	$40,507,089 34
Minor improvements and betterments:						
North		$425,000 00	$203,598 19	$628,598 19	$227,475 19	$401,123 00
South		725,000 00	107,009 01	832,009 01	123,534 01	708,475 00
Totals		$1,150,000 00	$310,607 20	$1,460,607 20	$351,009 20	$1,109,598 00
Cities ¼ cent—State highways:						
North	$3,350,539 79			$3,350,539 79	$906,575 59	$2,443,964 20
South	1,585,773 50			1,585,773 50	852,220 42	733,553 08
Totals	$4,936,313 29			$4,936,313 29	$1,758,796 01	$3,177,517 28

Joint highway districts:						
North			$192,357 02	$192,357 02		$192,357 02
Contingency reserves:						
North	$3,052,028 77	$2,515,400 00	$—1,601,115 43	$3,966,313 34		$3,966,313 34
South	5,949,635 53	2,572,100 00	—1,744,619 63	6,777,115 90		6,777,115 90
Totals	$9,001,664 30	$5,087,500 00	$—3,345,735 06	$10,743,429 24		$10,743,429 24
Summary:						
North	$6,402,568 56	$44,838,900 00	$—1,115,322 38	$50,126,146 18	$18,791,134 91	$31,335,011 27
South	7,535,409 03	54,803,100 00	—1,361,521 82	60,976,987 21	9,107,583 92	51,869,403 29
Totals	$13,937,977 59	$99,642,000 00	$—2,476,844 20	$111,103,133 39	$27,898,718 83	$83,204,414 56
City streets	$4,323,562 20	$18,400,000 00		$22,723,562 20	$55,495 58	$22,668,066 62
General maintenance		8,312,000 00		8,312,000 00	8,212,040 00	99,960 00
Major slides		1,300,000 00		1,300,000 00	58,600 00	1,241,400 00
Replacement and improved service		6,188,000 00		6,188,000 00	3,344,852 00	2,843,148 00
Maintenance in cities		3,200,000 00		3,200,000 00	931,952 00	2,268,048 00
Buildings and plants		2,000,000 00	$378,590 54	2,378,590 54	190,433 95	2,188,156 59
Highway planning		1,000,000 00	165,839 56	1,165,839 56	727,412 56	438,427 00
Construction and automotive equipment		2,000,000 00	2,002,991 10	4,002,991 10	1,564,852 17	2,438,138 93
Administration		4,500,000 00		4,500,000 00		4,500,000 00
Work for other State agencies	511,447 11			511,447 11	260,870 19	250,576 92
Supervision of outdoor advertising	12,991 60	60,000 00		72,991 60		72,991 60
Federal aid secondary reserve		4,595,138 00	—4,595,138 00			
Totals	$18,785,978 50	$151,197,138 00	$—4,524,561 00*	$165,458,555 50	$43,245,227 28	$122,213,328 22

* Federal Aid Secondary Apportionment transferred to County Highway Budget $4,526,211 00
Contributions 1,650 00
$4,524,561 00

** After giving effect to July and September votes of Highway Commission transferring unexpended 1948-1949 Fiscal Year Budget funds to 1949-1950 Fiscal Year Budget.

STATE HIGHWAY OPERATING BUDGET—1948-1949 FISCAL YEAR—Continued

Statement of Budgetary Transactions as of June 30, 1949 *

	Unexpended balances 1947-1948 fiscal year	Original budget 1948-1949 fiscal year	Budgetary adjustments	Contributions	Adjusted budget and contributions	Expenditures and contract obligations	Unexpended balance
Preliminary engineering:							
North		$2,250,000 00	$—174,202 86		$2,075,797 14	$2,075,797 14	
Contributions—north				$75,659 39	75,659 39	75,659 39	
South		1,975,000 00	1,160,324 74		3,135,324 74	3,135,324 74	
Contributions—south						60,000 00	[a]$—60,000 00
Totals		$4,225,000 00	$986,121 88	$75,659 39	$5,286,781 27	$5,346,781 27	$—60,000 00
Right of way:							
North		$4,900,000 00	$5,202,707 28		$10,102,707 28	$10,102,707 28	
Contributions—north				$4,755 49	4,755 49	4,755 49	
South		13,382,000 00	2,360,844 67		15,742,844 67	15,742,844 67	
Contributions—south				354,876 63	354,876 63	354,876 63	
Totals		$18,282,000 00	$7,563,551 95	$359,632 12	$26,205,184 07	$26,205,184 07	
Construction engineering:							
North		$2,000,000 00	$736,622 14		$2,736,622 14	$2,736,622 14	
Contributions—north				$38,358 66	38,358 66	38,358 66	
South		2,000,000 00	958,130 94		2,958,130 94	2,958,130 94	
Contributions—south				50,831 74	50,831 74	61,256 74	[a]$—10,425 00
Totals		$4,000,000 00	$1,694,753 08	$89,190 40	$5,783,943 48	$5,794,368 48	$—10,425 00
Construction projects:							
North		$25,954,500 00	$352,601 45		$26,307,101 45	$26,176,413 78	[b]$130,687 67
Contributions—north				$241,041 06	241,041 06	345,090 49	[a]—104,049 43
South		25,341,500 00	1,420,785 88		26,762,285 88	26,689,358 01	[b]72,927 87
Contributions—south				867,481 77	867,481 77	1,213,507 38	[a]—346,025 61
Totals		$51,296,000 00	$1,773,387 33	$1,108,522 83	$54,177,910 16	$54,424,369 66	$—246,459 50
Minor improvements and betterments:							
North		$650,000 00	$—116,949 25		$533,050 75	$533,050 75	
Contributions—north				$37,400 00	37,400 00	37,790 91	[a]$—390 91
South		1,000,000 00	—454,797 76		545,202 24	545,202 24	
Contributions—south				17,257 18	17,257 18	85,426 35	[a]—68,169 17
Totals		$1,650,000 00	$—571,747 01	$54,657 18	$1,132,910 17	$1,201,470 25	$—68,560 08
Cities ¼ cent—State highways:							
North	$4,956,417 83				$4,956,417 83	$1,605,878 04	[c]$3,350,539 79
South	4,977,807 12				4,977,807 12	3,392,033 62	[c]1,585,773 50
Totals	$9,934,224 95				$9,934,224 95	$4,997,911 66	$4,936,313 29

Joint highway districts:							
North			$230,753 14		$230,753 14	$230,753 14	
Contingency reserves:							
North	$5,405,603 18	$2,438,350 00	$—4,291,924 41		$3,552,028 77		[e]$3,552,028 77
South	6,542,642 62	2,981,650 00	—3,074,657 09		6,449,635 53		[e]6,449,635 53
Totals	$11,948,245 80	$5,420,000 00	$—7,366,581 50		$10,001,664 30		$10,001,664 30
Summary:							
North	$10,362,021 01	$38,192,850 00	$1,939,607 49	$397,214 60	$50,891,693 10	$43,962,877 21	$6,928,815 89
South	11,520,449 74	46,680,150 00	2,370,631 38	1,290,447 32	61,861,678 44	54,237,961 32	7,623,717 12
Totals	$21,882,470 75	$84,873,000 00	$4,310,238 87	$1,687,661 92	$112,753,371 54	$98,200,838 53	$14,552,533 01
City streets	$9,668,652 66	$18,400,000 00	$—1,284,771 73		$26,783,880 93	$22,460,318 73	[c]$4,323,562 20
General maintenance		7,783,982 00	550,868 78		8,334,850 78	8,334,850 78	
Major slides		1,353,000 00	—230,189 08		1,122,810 92	1,122,810 92	
Replacement and improved service		5,213,018 00	1,104,509 96		6,317,527 96	6,317,527 96	
Maintenance in cities		3,200,000 00	—768,794 88		2,431,205 12	2,415,205 12	[b]16,000 00
Buildings and plants		3,000,000 00	132,110 31		3,132,110 31	3,132,110 31	
Highway planning		850,000 00	29,970 21		879,970 21	879,970 21	
Construction and automotive equipment		2,000,000 00	582,526 72		2,582,526 72	2,582,526 72	
Administration		4,000,000 00	399,991 39		4,399,991 39	4,399,991 39	
Work for other State agencies	295,034 64		846,229 27		1,141,263 91	635,920 50	[d]505,343 41
Supervision of outdoor advertising	8,712 47	55,000 00	7,258 54		70,971 01	57,979 41	[c]12,991 60
Totals	$31,854,870 52	$130,728,000 00	†$5,679,948 36	$1,687,661 92	$169,950,480 80	$150,540,050 58	$19,410,430 22

[a]Uncollected contributions		$589,060 12
Overdraft work for other State agencies		6,103 70
Unexpended State funds		$20,005,594 04
Retained in 1948-1949 fiscal year budget:		
Contingency reserve—north	$500,000 00	
Contingency reserve—south	500,000 00	
Maintenance in cities	16,000 00	
Construction—north	130,687 67	
Construction—south	72,927 87	1,219,615 54
Transferred to 1949-1950 fiscal year budget		$18,785,978 50

[b] Retained in budget pending determination of additional contract requirements.

[c] Transferred to 1949-1950 fiscal year budget.

[d] $511,447.11 transferred to 1949-1950 fiscal year budget, overdraft of $6,103.70 being retained in 1948-1949 fiscal year budget.

[e] Transferred to 1949-1950 fiscal year budget except for $1,000,000 retained pending a determination of additional contract requirements.

* After giving effect to July and September Votes of Highway Commission clearing unexpended balances in budget items to Contingency Reserves for transfer to 1949-1950 fiscal year budget.

† Decrease in Highway Users Tax Apportionments	$2,960,311 59
Franchise tax-toll ferries	600 00
Interest on investments	664 47
Federal aid	78,403 00
Recoveries—U.S. war damage claims	218,709 86
Service agreements—work for other State agencies	846,229 27
Depreciation on equipment	1,367,718 04
Depreciation on buildings and plants	200,053 59
Increase outdoor advertising fees	7,258 54
	$5,679,948 36

STATE HIGHWAY OPERATING BUDGET—1947-1948 FISCAL YEAR

Statement of Budgetary Transactions as of June 30, 1949 *

	Transfers		Budgetary adjustments	Contributions	Adjusted budget	Expenditures and contract obligations	Unexpended balances
	From 1946-1947 fiscal year operating budget	From 1947-1948 fiscal year fiscal budget					
Preliminary engineering:							
North	$187,200 01	$1,500,000 00	$—27,212 97	$—79,722 12	$1,580,264 92	$1,580,501 82	[a] $—236 90
South	219,966 75	2,000,000 00	—403,280 17	—354 79	1,816,331 79	1,817,600 91	[a] —1,269 12
Totals	$407,166 76	$3,500,000 00	$—430,493 14	$—80,076 91	$3,396,596 71	$3,398,102 73	$—1,506 02
Right of Way:							
North	$1,025,187 74	$6,000,000 00	$—516,360 74	$—112,272 86	$6,396,554 14	$6,396,554 14	
South	1,832,388 96	7,500,000 00	—673,950 75	1,983 04	8,660,421 25	8,660,421 25	
Totals	$2,857,576 70	$13,500,000 00	$—1,190,311 49	$—110,289 82	$15,056,975 39	$15,056,975 39	
Construction engineering:							
North	$471,340 34	$2,100,000 00	$—331,526 47	$—7,691 03	$2,232,122 84	$2,239,034 13	[a] $—6,911 29
South	771,455 70	2,100,000 00	—640,718 01	2,087 93	2,232,825 62	2,244,052 41	[a] —11,226 79
Totals	$1,242,796 04	$4,200,000 00	$—972,244 48	$—5,603 10	$4,464,948 46	$4,483,086 54	$—18,138 08
Construction projects:							
North	$26,612,215 11	$16,714,000 00	$—65,297 39	$—4,423,440 57	$38,837,477 15	$38,877,579 20	[a] $—40,102 05
South	21,207,588 16	17,546,600 00	2,186,412 52	574,273 89	41,514,874 57	41,741,631 51	[a] —226,756 94
Totals	$47,819,803 27	$34,260,600 00	$2,121,115 13	$—3,849,166 68	$80,352,351 72	$80,619,210 71	$—266,858 99
Cities ¼ cent—State highways:							
North	$5,718,086 55	$1,294,358 94			$7,012,445 49	$2,056,027 66	[b] $4,956,417 83
South	7,707,483 86	1,902,341 89			9,609,825 75	4,632,018 63	[b] 4,977,807 12
Totals	$13,425,570 41	$3,196,700 83			$16,622,271 24	$6,688,046 29	$9,934,224 95
Joint highway districts:							
North	$169,898 86	$142,000 00	$—274,476 86		$37,422 00	$73,030 10	[a] $—35,608 10

Contingency reserves:							
North	$300,079 16	$3,886,355 69	$1,254,168 33		$5,440,603 18		[c] $5,440,603 18
South	2,151,142 89	4,851,937 45	—420,437 72		6,582,642 62		[c] 6,582,642 62
Totals	$2,451,222 05	$8,738,293 14	$833,730 61		$12,023,245 80		$12,023,245 80
Summary:							
North	$34,484,007 77	$31,636,714 63	$39,293 90	$—4,623,126 58	$61,536,889 72	$51,222,727 05	$10,314,162 67
South	33,890,026 32	35,900,879 34	48,025 87	577,990 07	70,416,921 60	59,095,724 71	11,321,196 89
Totals	$68,374,034 09	$67,537,593 97	$87,319 77	$—4,045,136 51	$131,953,811 32	$110,318,451 76	$21,635,359 56
City streets	$5,049,002 45	$12,835,402 48			$17,884,404 93	$8,215,752 27	[b] $9,668,652 66
General maintenance	16,274 50	9,427,613 99	$—1,404,000 00		8,039,888 49	8,039,888 49	
Major slides	25,990 75	1,572,013 08	—600,000 00		998,003 83	998,003 83	
Replacement and improved service	336,411 29	4,922,143 00	575,668 84		5,834,223 13	5,834,223 13	
Maintenance in cities		—86,308 57	1,349,974 97		1,263,666 40	1,263,666 40	
Buildings and plants	1,217,117 98	2,475,699 63	—8,963 58		3,683,854 03	3,683,854 03	
Highway planning	170,632 11	627,166 79			797,798 90	797,798 90	
Construction and automotive equipment	1,798,245 30	1,424,641 58			3,222,886 88	3,222,886 88	
County postwar projects	487 40	—487 40					
Administration	34,191 96	3,902,148 12			3,936,340 08	3,936,340 08	
Work for other State agencies		605,225 26			605,225 26	310,190 62	[b] 295,034 64
Supervision of outdoor advertising		64,306 19			64,306 19	55,593 72	[b] 8,712 47
Totals	$77,022,387 83	$105,307,158 12		$—4,045,136 51	$178,284,409 44	$146,676,650 11	$31,607,759 33

[a] Uncollected contributions		332,311 22
Unexpended State funds		$31,930,070 55
Retained in 1947-1948 fiscal year budget:		
Contingency reserve—north	$35,000 00	
Contingency reserve—south	40,000 00	
Construction—south	200 03	75,200 03
[b] Transferred to 1948-1949 fiscal year budget		$31,854,870 52

[c] Transferred to 1948-1949 fiscal year budget except for amounts of $35,000 and $40,000 retained as Contingency Reserves, North and South, respectively.

* After giving effect to July and September Votes of Highway Commission clearing balances in budget items to Contingency Reserves for transfer to ensuing budgets.
Minus figure under Contributions, Construction Projects, due to elimination from budget of balance of $4,959,399.60 in appropriation for Golden Gate Bridge approaches.

COUNTY HIGHWAY BUDGET—1949-1950 FISCAL YEAR

As of June 30, 1949

APPORTIONMENT TO COUNTIES OF FIRST YEAR ALLOCATION OF FEDERAL AID SECONDARY FUNDS UNDER FEDERAL AID HIGHWAY ACT OF 1948

County	Apportionment	County	Apportionment
Alameda	$50,759	Placer	$41,381
Alpine	20,104	Plumas	39,971
Amador	20,104	Riverside	147,814
Butte	66,276	Sacramento	89,910
Calaveras	24,257	San Benito	28,851
Colusa	27,531	San Bernardino	269,444
Contra Costa	58,561	San Diego	116,906
Del Norte	20,104	San Joaquin	94,241
El Dorado	34,801	San Luis Obispo	63,317
Fresno	205,819	San Mateo	36,302
Glenn	32,724	Santa Barbara	54,349
Humboldt	74,701	Santa Clara	92,357
Imperial	84,666	Santa Cruz	32,760
Inyo	99,651	Shasta	65,543
Kern	180,191	Sierra	20,104
Kings	48,194	Siskiyou	94,643
Lake	26,960	Solano	39,841
Lassen	59,791	Sonoma	93,807
Los Angeles	411,816	Stanislaus	80,993
Madera	48,903	Sutter	29,210
Marin	36,610	Tehama	47,091
Mariposa	25,510	Trinity	42,370
Mendocino	63,794	Tulare	146,387
Merced	68,960	Tuolumne	34,919
Modoc	51,071	Ventura	63,266
Mono	35,908	Yolo	35,502
Monterey	80,970	Yuba	23,520
Napa	34,935		
Nevada	25,183	Total county apportionments	$4,020,746
Orange	77,093		
		Contingency reserve	505,465
		Total	$4,526,211

COUNTY HIGHWAY BUDGET
STATEMENT OF BUDGETARY TRANSACTIONS
As of June 30, 1949

APPORTIONMENT TO COUNTIES OF FEDERAL AID SECONDARY FUNDS UNDER FEDERAL AID ACT OF 1944 AND STATE FUNDS UNDER COUNTY HIGHWAY AID ACT, CHAPTERS 938 AND 952, STATUTES OF 1945

County	Apportionments	Contributions	Total budget	Expenditures authorized work orders	Unencumbered balance available
Alameda	$321,777 00	$661 16	$322,438 16	$321,924 42	$513 74
Alpine	127,446 00	2,000 00	129,446 00	2,000 00	127,446 00
Amador	127,446 00	1,833 79	129,279 79	225,358 57	—96,078 78
Butte	420,150 00	69,252 47	489,402 47	727,490 65	—238,088 18
Calaveras	153,782 00	1,500 00	155,282 00	189,869 55	—34,587 55
Colusa	174,538 00	9,017 56	183,555 56	230,570 65	—47,015 09
Contra Costa	371,242 00	29,261 56	400,503 56	479,022 28	—78,518 72
Del Norte	127,446 00	2,844 47	130,290 47	170,137 45	—39,846 98
El Dorado	220,629 00	2,273 50	222,902 50	253,421 00	—30,518 50
Fresno	1,304,780 00	3,517 22	1,308,297 22	1,163,269 84	145,027 38
Glenn	207,446 00	29,274 42	236,720 42	350,724 19	—114,003 77
Humboldt	473,566 00	97,067 55	570,633 55	624,313 49	—53,679 94
Imperial	536,729 00	537 13	537,266 13	462,437 13	74,829 00
Inyo	631,729 00	2,000 00	633,729 00	581,271 32	52,457 68
Kern	1,142,313 00	4,092 01	1,146,405 01	931,941 03	214,463 98
Kings	305,535 00	1,354 75	306,889 75	261,306 10	45,583 65
Lake	170,905 00	1,897 14	172,802 14	167,551 58	5,250 56
Lassen	379,042 00	26,367 56	405,409 56	476,302 96	—70,893 40
Los Angeles	2,610,683 00		2,610,683 00	1,742,654 16	868,028 84
Madera	310,021 00	60,133 25	370,154 25	315,784 69	54,369 56
Marin	232,079 00	1,900 00	233,979 00	229,866 23	4,112 77
Mariposa	161,722 00	552 61	162,274 61	90,803 27	71,471 34
Mendocino	404,430 00	36,876 63	441,306 63	537,440 69	—96,134 06
Merced	437,164 00	3,000 00	440,164 00	239,738 00	200,426 00
Modoc	323,749 00	35,562 97	359,311 97	460,048 78	—100,736 81
Mono	227,618 00		227,618 00	190,861 29	36,756 71
Monterey	513,305 00	5,503 09	518,808 09	365,166 40	153,641 69
Napa	221,482 00	17,150 59	238,632 59	232,887 71	5,744 88
Nevada	159,645 00		159,645 00	1,200 00	158,445 00
Orange	488,730 00		488,730 00	421,856 48	66,873 52
Placer	262,339 00	2,013 79	264,352 79	158,927 97	105,424 82
Plumas	253,393 00	72,825 46	326,218 46	485,978 65	—159,760 19
Riverside	937,060 00	4,100 00	941,160 00	411,175 20	529,984 80
Sacramento	569,976 00	1,931 47	571,907 47	519,773 17	52,134 30
San Benito	182,901 00	3,000 00	185,901 00	169,637 14	16,263 86
San Bernardino	1,708,114 00	2,350 00	1,710,464 00	1,568,029 64	142,434 36
San Diego	741,124 00	3,500 00	744,624 00	904,164 93	—159,540 93
San Joaquin	597,435 00	3,968 28	601,403 28	369,294 14	232,109 14
San Luis Obispo	401,382 00	1,795 02	403,177 02	294,457 33	108,719 69
San Mateo	230,138 00	89,855 50	319,993 50	471,609 96	—151,616 46
Santa Barbara	344,544 00		344,544 00	345,279 00	—735 00
Santa Clara	585,507 00	15,637 50	601,144 50	632,363 41	—31,218 91
Santa Cruz	207,674 00	3,300 00	210,974 00	153,536 68	57,437 32
Shasta	415,501 00	16,430 77	431,931 77	476,252 22	—44,320 45
Sierra	127,446 00	8,103 00	135,549 00	134,711 51	837 49
Siskiyou	599,980 00	16,799 83	616,779 83	740,966 67	—124,186 84
Solano	252,563 00	3,565 37	256,128 37	107,532 95	148,595 42
Sonoma	594,698 00	2,150 00	596,848 00	544,977 87	51,870 13
Stanislaus	513,457 00	386 66	513,843 66	407,657 94	106,185 72
Sutter	185,165 00	684 49	185,849 49	410,049 49	—224,200 00
Tehama	298,520 00	764 68	299,284 68	524,116 44	—224,831 76
Trinity	268,597 00	8,680 00	277,277 00	297,197 31	—19,920 31
Tulare	928,002 00	111,990 00	1,039,992 00	1,238,623 69	—198,631 69
Tuolumne	221,364 00	900 00	222,264 00	85,900 00	136,364 00
Ventura	401,086 00		401,086 00	260,624 08	140,461 92
Yolo	225,072 00	40,617 17	265,689 17	321,693 05	—56,003 88
Yuba	149,112 00	53,366 64	202,478 64	304,886 63	—102,407 99
County apportionments	$25,489,279 00	$914,147 06	$26,403,426 06	$24,786,636 98	$1,616,789 08
Grade crossing protection	265,000 00		265,000 00	240,866 19	24,133 81
Grade crossing projects	184,047 00		184,047 00	195,362 00	—11,315 00
Totals	$25,938,326 00	$914,147 06	$26,852,473 06	$25,222,865 17	$1,629,607 89

Overdrafts represent amounts assigned to Division of Highways from funds apportioned under Chapter 20, Statutes of 1946, which have not been collected, and amounts due from counties.

ACCESS HIGHWAYS BUDGET
STATEMENT OF BUDGETARY TRANSACTIONS
As of June 30, 1949

	Budget	Expenditures authorized work orders	Unencumbered balance available
Construction of highways			
North	$6,867,970 97	$6,722,910 34	$145,060 63
Contributions—north	292 81	292 81	
South	7,074,015 43	7,069,073 74	4,941 69
Off State system—north	7,775,658 62	7,754,419 25	21,239 37
Contributions—off State system—north	23,749 46	23,749 46	
Off State system—south	13,651,373 78	13,233,671 30	417,702 48
Contributions—off State system—south	308,570 62	308,570 62	
Total	$35,701,631 69	$35,112,687 52	$588,944 17

GRADE SEPARATIONS OPERATING BUDGET
STATEMENT OF BUDGETARY TRANSACTIONS
As of June 30, 1949

	Transfers from 97-98 F.Y.	Budgetary adjustments and contributions	Adjusted budget	Expenditures authorized work orders	Unencumbered balance available
Construction					
North	$1,299,000 00	$—375,200 00	$923,800 00	$923,800 00	
South		4,350 00	4,350 00	4,350 00	
Off State system	335,107 24	361,750 13	696,857 37	690,100 33	$6,757 04
Off State system—contribution		50,000 00	50,000 00	150,000 00	[a] —100,000 00
Grade crossing protection	120,000 00		120,000 00	112,364 59	7,635 41
Contingency reserve	21,900 79	9,099 87	31,000 66		31,000 66
Total	$1,776,008 03	$50,000 00	$1,826,008 03	$1,880,614 92	$—54,606 89

[a] Represents uncollected contribution.

APPENDIX B

APPORTIONMENT OF MOTOR VEHICLE FEES AND FUEL TAXES

(a) Yearly Registration of Motor Vehicles in California.

(b) County Apportionment of Funds Derived from Motor Vehicle Fees and Fuel Taxes, January 1, 1914 to June 30, 1949.

(c) Apportionment of Funds Derived from Motor Vehicle Fees and Fuel Taxes, October 1, 1923 to June 30, 1949.

STATEMENT OF REGISTRATION OF MOTOR VEHICLES IN THE STATE OF CALIFORNIA FROM RECORDS OF THE DEPARTMENT OF MOTOR VEHICLES

	Fee paid registrations			Exempt registrations	Total registrations	Yearly increase	Percent increase over previous year
	Autos and trucks	Trailers	Motorcycles				
3/22/05- 6/30/06	6,428				6,428		
7/ 1/06- 6/30/08	17,015				17,015	10,587	164.70
7/ 1/08- 6/30/10	36,146				36,146	19,131	112.44
7/ 1/10- 6/30/12	76,669				76,669	40,523	112.11
7/ 1/12-12/31/13	122,444				122,444	45,775	59.70
1914	123,516		24,709		148,225	25,781	21.06
1915	164,795		26,401		191,196	42,971	28.39
1916	232,440		30,994		263,434	72,238	37.78
1917	306,916		30,417		337,333	73,899	28.05
1918	364,800	674	25,973		391,447	54,114	16.04
1919	477,450	1,658	26,072		505,180	113,733	29.06
1920	571,979	2,644	20,564	9,000	604,187	99,007	19.60
1921	680,614	3,421	17,729	11,721	713,485	109,298	18.09
1922	861,807	4,861	16,301	14,163	897,132	183,647	25.74
1923	1,100,283	5,808	14,694	16,660	1,137,445	240,313	26.79
1924	1,319,072	19,033	12,324	17,776	1,368,205	230,760	20.29
1925	1,439,402	25,453	10,997	22,280	1,498,132	129,927	9.50
1926	1,599,246	30,759	10,289	24,027	1,664,321	166,189	11.09
1927	1,693,195	34,126	9,444	26,108	1,762,873	98,552	5.92
1928	1,799,890	37,073	9,449	30,520	1,876,932	114,059	6.47
1929	1,974,341	42,899	9,628	35,275	2,062,143	185,211	9.87
1930	2,041,356	48,532	9,405	37,337	2,136,630	74,487	3.61
1931	2,043,281	55,024	8,970	38,199	2,145,474	8,844	0.41
1932	1,971,616	61,870	8,338	38,433	2,080,257	—65,217	—3.04
1933	1,958,797	69,987	8,134	38,507	2,075,425	—4,832	—0.23
1934	1,993,116	79,474	8,294	39,569	2,120,453	45,028	2.17
1935	2,150,740	95,227	8,861	25,657	2,280,485	160,032	7.55
1936	2,327,029	112,080	9,816	28,638	2,477,563	197,078	8.64
1937	2,483,473	132,927	11,240	29,593	2,657,233	179,670	7.25
1938	2,509,691	142,257	11,785	30,732	2,694,465	157,366	5.92
1939	2,605,147	155,304	13,247	33,875	2,807,573	113,108	4.20
1940	2,772,159	167,917	15,876	34,310	2,990,262	182,689	6.51
1941	2,961,247	184,096	18,051	35,305	3,198,699	208,437	6.97
1942	2,834,808	187,431	19,913	38,292	3,080,444	—118,255	—3.70
1943	2,748,901	176,257	19,414	41,224	2,985,796	—94,648	—3.07
1944	2,779,243	191,672	22,309	43,406	3,036,630	50,834	1.70
1945	2,853,177	238,490	27,173	44,536	3,163,376	126,746	4.17
1946	3,097,882	307,816	36,353	47,773	3,489,824	326,448	10.32
1947	3,476,554	349,743	53,234	54,564	3,934,095	444,271	12.73
1948	3,753,780	361,230	60,857	57,722	4,233,589	299,494	7.61
1949 to June 30	3,762,628	317,019	48,327	63,158	4,191,132		

—Indicates decrease.

COUNTY APPORTIONMENTS OF FUNDS DERIVED FROM MOTOR VEHICLE FEES AND FUEL TAXES

County	County apportionment of motor vehicle fees Jan. 1, 1914 to Dec. 31, 1947	County apportionment of motor vehicle fuel tax, Oct. 1, 1923 to June 30, 1947	Subtotal of apportionments prior to operation of the Collier-Burns Act	County apportionment of funds pursuant to Collier-Burns Highway Act of 1947			Total apportionment Jan. 1, 1914 to June 30, 1949
				July 1, 1947 to Dec. 31, 1947	1948	Jan. 1, 1949 to June 30, 1949	
Alameda	†$7,889,019 48	*$21,003,804 11	$28,892,823 59	$543,026 07	$2,045,584 36	$1,059,154 21	$32,540,588 23
Alpine	4,813 47	496,172 18	500,985 65	15,673 23	59,108 01	29,109 53	604,876 42
Amador	141,383 11	785,858 73	927,241 84	40,594 64	146,789 67	72,195 05	1,186,821 20
Butte	855,623 82	2,500,072 44	3,355,696 26	149,267 75	504,582 79	252,173 69	4,261,720 49
Calaveras	137,787 20	783,901 09	921,688 29	68,974 91	225,837 92	111,916 28	1,328,417 40
Colusa	268,037 71	999,340 32	1,267,378 03	80,394 62	257,775 36	128,381 14	1,733,929 15
Contra Costa	†1,682,284 96	*5,032,328 32	6,714,613 28	192,816 54	747,148 29	395,962 89	8,050,541 00
Del Norte	84,990 28	*668,818 46	753,808 74	21,751 68	81,730 29	41,392 45	898,683 16
El Dorado	191,583 41	924,170 57	1,115,753 98	79,916 51	273,932 02	137,996 48	1,607,598 99
Fresno	3,702,179 76	8,957,095 06	12,659,274 82	415,273 64	1,414,642 18	721,614 83	15,210,805 47
Glenn	307,550 17	*1,106,746 94	1,414,297 11	95,133 02	304,144 29	151,943 37	1,965,517 79
Humboldt	819,005 20	2,434,113 52	3,253,118 72	120,360 39	412,469 16	207,111 64	3,993,059 91
Imperial	1,126,820 51	*3,139,885 95	4,266,706 46	210,243 91	673,664 76	350,727 50	5,501,342 63
Inyo	165,264 51	808,837 49	974,102 00	110,341 41	342,302 99	169,451 70	1,596,198 10
Kern	†2,339,878 22	*6,262,247 79	8,602,126 01	319,235 05	1,114,288 52	557,712 92	10,593,361 50
Kings	662,120 57	1,999,351 32	2,661,471 89	122,562 36	408,587 81	203,466 88	3,396,088 94
Lake	175,418 34	869,516 00	1,044,934 34	58,231 46	196,688 22	98,542 76	1,398,396 78
Lassen	229,743 89	998,979 92	1,228,723 81	124,468 96	387,290 07	194,385 53	1,934,868 37
Los Angeles	†44,785,740 06	*120,557,784 91	165,343,524 97	3,444,929 89	13,065,564 38	6,307,721 18	188,161,740 42
Madera	394,016 66	1,417,226 81	1,811,243 47	138,647 21	442,900 05	220,634 73	2,613,425 46
Marin	677,187 51	2,234,401 47	2,911,588 98	68,328 36	264,249 29	134,533 13	3,378,699 76
Mariposa	75,548 75	661,127 43	736,676 18	54,257 89	177,488 27	90,437 42	1,058,859 76
Mendocino	432,033 04	1,477,474 99	1,909,508 03	109,532 97	358,894 13	180,959 94	2,558,895 07
Merced	807,093 21	2,507,317 66	3,314,410 87	199,907 15	646,996 18	327,515 29	4,488,829 49
Modoc	138,563 51	767,911 66	906,475 17	78,194 81	253,539 38	127,239 45	1,365,448 81
Mono	25,915 20	546,887 71	572,802 91	59,897 16	191,038 20	99,731 74	923,470 01
Monterey	1,130,162 04	*3,508,491 55	4,638,653 59	150,729 66	535,422 86	272,289 31	5,597,095 42
Napa	505,579 57	1,675,802 94	2,181,382 51	55,310 93	203,550 91	103,613 67	2,543,858 02
Nevada	228,412 79	1,037,126 96	1,265,539 75	52,164 79	179,037 20	89,847 82	1,586,589 56
Orange	2,734,226 35	*7,245,547 46	9,979,773 81	205,712 46	784,864 24	381,029 67	11,351,380 18

Placer	510,353 73	1,701,558 77	2,211,912 50	85,413 99	296,098 16	147,926 12	2,741,350 77
Plumas	143,645 55	807,993 59	951,639 14	64,929 04	212,720 37	106,371 59	1,335,660 14
Riverside	1,788,157 86	5,075,637 39	6,863,795 25	336,686 13	1,032,081 74	494,088 02	8,726,651 14
Sacramento	2,798,154 25	7,905,219 95	10,703,374 20	247,064 62	921,666 65	475,843 89	12,347,949 36
San Benito	253,474 18	1,011,193 60	1,264,667 78	46,974 23	162,449 34	81,179 15	1,555,270 50
San Bernardino	2,680,208 84	*7,427,714 09	10,107,922 93	390,264 00	1,387,499 94	699,407 18	12,585,094 05
San Diego	4,594,698 16	*12,789,376 18	17,384,074 34	405,596 28	1,554,203 90	799,626 34	20,143,500 86
San Francisco	3,496,430 50	*20,838,038 77	29,334,469 27	505,984 44	1,931,881 20	941,661 53	32,713,996 44
San Joaquin	2,396,974 84	6,301,931 53	8,698,906 37	206,141 95	732,353 86	359,629 03	9,997,031 21
San Luis Obispo	687,380 04	*2,135,785 38	2,823,165 42	137,853 55	464,090 25	231,520 63	3,656,629 85
San Mateo	1,524,891 92	*4,716,024 61	6,240,916 53	158,721 87	633,239 38	339,925 13	7,372,802 91
Santa Barbara	†1,377,382 61	*3,852,231 22	5,229,613 83	107,329 53	402,030 12	198,336 17	5,937,309 65
Santa Clara	3,220,645 21	8,568,925 90	11,789,571 11	240,234 51	933,160 72	488,849 20	13,451,815 54
Santa Cruz	848,701 56	2,598,065 57	3,446,767 13	80,373 26	299,502 39	150,945 84	3,977,588 62
Shasta	398,125 70	*1,436,902 91	1,835,028 61	123,271 93	407,259 91	203,149 53	2,568,709 98
Sierra	44,164 23	581,674 89	625,839 12	30,484 97	104,295 10	51,731 95	812,351 14
Siskiyou	466,805 43	*1,595,009 49	2,061,814 92	156,222 29	491,982 05	255,721 62	2,965,740 88
Solano	913,226 39	*2,765,443 73	3,678,670 12	99,239 38	351,183 16	174,976 91	4,304,069 57
Sonoma	1,495,669 66	*4,069,015 23	5,564,684 89	155,568 71	557,306 20	281,604 93	6,559,164 73
Stanislaus	1,574,418 86	4,232,823 42	5,807,242 28	206,103 65	731,510 44	366,093 64	7,110,950 01
Sutter	351,821 48	1,292,193 00	1,644,014 48	94,575 38	309,792 55	154,337 11	2,202,719 52
Tehama	313,208 39	*1,160,589 83	1,473,798 22	106,542 09	338,573 60	168,377 46	2,087,291 37
Trinity	45,458 77	*597,521 43	642,980 20	72,631 86	228,166 33	114,191 48	1,057,969 87
Tulare	1,936,965 44	5,103,374 58	7,040,340 02	344,595 80	1,134,536 65	563,825 98	9,083,298 45
Tuolumne	185,339 59	*879,347 75	1,064,687 34	55,607 10	185,178 85	91,651 35	1,397,124 64
Ventura	1,135,886 23	*3,372,308 22	4,508,194 45	105,980 42	399,529 55	192,503 20	5,206,207 62
Yolo	577,839 93	1,802,873 82	2,380,713 75	101,098 55	332,925 17	165,069 73	2,979,807 20
Yuba	323,925 88	*1,199,991 69	1,523,917 57	58,943 97	204,709 77	102,719 04	1,890,290 35
Totals	†$113,801,938 53	*$319,227,108 30	$433,029,046 83	$12,110,311 93	$43,440,039 15	$21,620,055 95	$510,199,453 86

† Deduct the following amounts for reimbursement of the Department of Motor Vehicles for salaries paid highway crossing guards:
1945-46 Contra Costa $1,574.84, Kern $5,233.80, Los Angeles $111,750.68, Santa Barbara $2,069.70
1947 Alameda $1,618.00, Contra Costa $1,265.50, Kern $1,604.00, Los Angeles $35,735.00, Santa Barbara $1,959.00

* Includes repayment of unemployment relief loans to County as provided in Section 23 of Chapter 207, Statutes of 1933 (for tabulation see First Annual Report)

APPORTIONMENT OF FUNDS DERIVED FROM MOTOR VEHICLE FEES AND FUEL TAXES ‡

	To counties	To State Highway Maintenance Fund	To State Highway Construction Fund	To State Highway Fund				Total	Total registration	Average per vehicle
				To Division of Highways	¼ cent to cities for state highways	¼ cent to cities for major streets	To city streets			
Oct. 1, 1923-Dec. 31, 1923	$1,389,257 80	$1,389,257 80						$2,778,515 60		
Jan. 1, 1924-Dec. 31, 1924	6,182,518 97	6,182,518 96						12,365,037 93	1,368,205	$9 04
Jan. 1, 1925-Dec. 31, 1925	7,194,051 54	7,194,051 54						14,388,103 08	1,498,132	9 60
Jan. 1, 1926-Dec. 31, 1926	8,260,360 86	8,260,360 86						16,520,721 72	1,664,321	9 93
Jan. 1, 1927-Dec. 31, 1927	9,349,534 81	9,349,534 82	$3,788,334 00					22,487,403 63	1,762,873	12 76
Jan. 1, 1928-Dec. 31, 1928	9,839,491 88	9,839,491 90	9,637,204 99					29,316,188 77	1,876,932	15 62
Jan. 1, 1929-Dec. 31, 1929	11,319,524 47	11,319,524 47	11,155,181 54					33,794,230 48	2,062,143	16 39
Jan. 1, 1930-Dec. 31, 1930	11,858,452 77	11,858,452 77	11,857,727 76					35,574,633 30	2,136,630	16 65
Jan. 1, 1931-Dec. 31, 1931	10,451,671 52	10,451,671 51	10,451,671 53					31,355,014 56	2,145,474	14 61
Jan. 1, 1932-Dec. 31, 1932	12,079,972 96	12,079,972 95	12,079,972 95					36,239,918 86	2,080,257	17 42
Jan. 1, 1933-Dec. 31, 1933	11,706,298 32	5,519,290 65	5,519,290 66	$10,827,263 41	$1,546,751 91			35,118,894 95	2,075,425	16 92
Jan. 1, 1934-Dec. 31, 1934	12,097,841 61			21,171,222 82	3,024,460 41			36,293,524 84	2,120,453	17 12
Jan. 1, 1935-Dec. 31, 1935	13,277,072 67			21,420,000 91	3,319,901 49	†$1,819,242 94		39,836,218 01	2,280,485	17 47
Jan. 1, 1936-Dec. 31, 1936	14,289,861 54			21,434,808 98	3,572,457 05	3,572,457 05		42,869,584 62	2,476,563	17 31
Jan. 1, 1937-Dec. 31, 1937	15,452,558 23			23,178,837 35	3,863,139 56	3,863,139 56		46,357,674 70	2,657,233	17 45
Jan. 1, 1938-Dec. 31, 1938	15,547,174 80			23,320,762 20	3,886,793 70	3,886,793 70		46,641,524 40	2,694,465	17 31
Jan. 1, 1939-Dec. 31, 1939	16,405,603 51			24,608,405 25	4,101,400 88	4,101,400 88		49,216,810 52	2,807,573	17 53
Jan. 1, 1940-Dec. 31, 1940	17,057,387 76			25,586,081 66	4,264,346 94	4,264,346 94		51,172,163 30	2,990,262	17 11
Jan. 1, 1941-Dec. 31, 1941	18,989,357 93			28,484,036 88	4,747,339 49	4,747,339 48		56,968,073 78	3,198,699	17 81
Jan. 1, 1942-Dec. 31, 1942	17,511,229 06			26,266,843 62	4,377,807 27	4,377,807 27		52,533,687 22	3,080,444	17 05
Jan. 1, 1943-Dec. 31, 1943	13,854,631 47			20,781,947 23	3,463,657 86	3,463,657 86		41,563,894 42	2,985,796	13 92
Jan. 1, 1944-Dec. 31, 1944	13,950,402 91			20,925,604 36	3,487,600 73	3,487,600 73		41,851,208 73	3,036,630	13 78
Jan. 1, 1945-Dec. 31, 1945	16,534,831 68			24,802,247 59	4,133,707 89	4,133,707 89		49,604,495 05	3,163,376	15 68
Jan. 1, 1946-Dec. 31, 1946	22,822,158 83			34,233,238 25	5,705,539 71	5,705,539 71		68,466,476 50	3,489,824	19 62
Jan. 1, 1947-Dec. 31, 1947*	19,030,607 18			28,685,223 41	1,730,073 81	7,189,962 57		56,635,866 97	3,934,095	14 40
Jan. 1, 1948-Dec. 31, 1948#	43,440,033 15			70,431,664 33			$17,056,567 78	130,928,265 26	4,233,589	30 93
Jan. 1, 1949-June 30, 1949	21,620,055 95			49,890,583 43			8,394,125 29	79,904,764 67		
Totals	$403,317,804 58	$93,444,128 23	$64,489,383 43	$493,757,562 30	$58,176,443 79	$57,564,461 67	$25,450,693 07	$1,196,200,477 07		

4-year average of 2 cents tax	$10 33
19-year average of 3 cents tax	16 67
2-year average of 4½ cents tax	22 67

2-cent tax per gallon from October 1, 1923, to July 28, 1927. Apportioned 1 cent to counties, 1 cent to State Highway Maintenance Fund.

3-cent tax per gallon from July 29, 1927, to June 30, 1933. Apportioned 1 cent to counties, 1 cent to State Highway Maintenance Fund, 1 cent to State Highway Construction Fund.

3-cent tax per gallon from July 1, 1933, to June 30, 1935. Apportioned 1 cent to counties, 1¾ cents to State Highway Fund, ¼ cent to cities for state highways.

3-cent tax per gallon from July 1, 1935, to June 30, 1947. Apportioned 1 cent to counties, 1½ cents to Division of Highways, ¼ cent to cities for state highways, ¼ cent to cities for streets of major importance.

4½-cent tax per gallon from July 1, 1947. Fuel tax apportioned 1⅜ cents to counties, 2½ cents to Division of Highways, ⅝ cent to city streets.

‡Apportionments prior to July 1, 1947 were made from fuel taxes only.

† Includes $2,500.00 appropriated for the Code Commission by Chapter 698, Statutes 1935.

*Apportionments for the last half of 1947 were made to effect the transition from former acts to operation under the Collier-Burns Act.

#Apportionments beginning with January 1, 1948 were made according to the Collier-Burns Highway Act of 1947.

APPENDIX C

CONTRACT STATISTICS

(a) Completed Contracts—July 1, 1946, to June 30, 1949.

(b) Incomplete Contracts—June 30, 1949.

NOTE—For contracts completed prior to July 1, 1946, see Fifteenth Biennial Report.

NOTE—* opposite a contract indicates final cost figures not yet available.

COMPLETED CONTRACTS—June 30, 1949

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
4T48	Alameda	5	A	Near Greenville		11/21/46	Day Labor	Truck Scale	$12,000		$12,000
4TC35	Alameda	5	B	San Miguel Ave.-Parkway	0.4	5/16/47	McGuire & Hester	Storm Drain	22,650	$1,697	24,347
4TC49	Alameda	5	B	At Redwood Road	0.3	4/22/48	J. R. Armstrong	Signals & Channelization	37,640	6,821	44,461
4T114	Alameda	5	Hay	"A" St. to "B" St.		2/ 3/49	Day Labor	Grade & Surface	10,852	1,492	*12,344
4TC41	Alameda	5	Oak	Toll Plaza to Distribution Structure	0.9	6/18/47	Chas. L. Harney, Inc.	Additional Traffic Lanes	144,856	11,609	156,465
4TC43-P	Alameda	5	Oak	Bay Bridge Toll Plaza	0.6	9/ 8/47	San Francisco Br. Co.	Sand Fill	384,718	22,000	*406,718
4TC44-P	Alameda	5	Oak	Bay Bridge Toll Plaza	0.6	9/12/47	Piombo Const. Co.	Slope Protection	131,315	15,500	*146,815
15T3	Ala-S.F.	5, 68	Oak-S.F.	See San Francisco County							
15T5	Ala-S.F.	5, 68	Oak-S.F.	See San Francisco County							
4TC25	Alameda	5, 69	B, C, B	Bet. Dublin & Mission San Jose & Bet. Alvarado & San Leandro	7.6	6/ 7/46	A. S. Jones	Repair with C.R.B. & P.M.S.	161,255	16,747	178,002
4WC22	Alameda	5, 69	C, A	Bet. Warm Springs & Mission San Jose & Bet. Warm Springs & Centerville	8.3	3/11/46	A. S. Jones	Repair Shoulders	40,118	8,925	49,043
14TMC2	Alameda	5, 69	Oak	At Distribution Structure		8/11/48	Pacific Br. Painting Co.	Waterproof & Paint Bridge	40,250		*40,250
4WC29-P	Ala., C.C.	5, 107	B, A	Hayward to Dublin & Danville to 3.1 Mi. south	5.3	6/ 7/47	J. R. Armstrong	Plant-Mixed Surfacing	151,804	20,300	*172,404
4T42	Alameda	14, 5	Emv	In Emeryville		9/20/46	Day Labor	Signals	14,676	591	15,267
0-4TC68	Alameda	69	A, B, Sln	Centerville to San Leandro	6.7	8/ 3/48	Granite Const. Co.	Base and Surface	180,503	25,000	*205,503
4W37	Alameda	69	B	In San Lorenzo Village		10/29/46	Day Labor	Traffic Signals	5,974	371	6,345
4TC23	Ala-C.C.	69, 14	Alb, Rch, ECr, A, Pin, Her, B	Bet. El Cerrito Hill Overhead in Albany & Carquinez Bridge	10.5	5/23/46	J. R. Armstrong Const. Co.	Repair with C.R.B., P.M.S. & Pene. Tr. & Construct Decelerating Lane	58,410	6,832	65,242
4WC31-F	Alameda	69	Oak	1 Mi. N. of S.C.L. of Oakland to 0.3 Mi. S. of High St.	2.3	6/25/47	Johnson-Western Co. & Amer. Pipe & Const. Co.	Grade	861,782	80,000	*941,782
14WC8	Alameda	69	Oak	5th Ave. Overhead		6/21/46	Duncanson-Harrelson Co. & Stolte, Inc.	Overcrossing	1,762,507	85,000	*1,847,507

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
14WC11-F	Alameda	69	Oak	At 29th Ave. in Oakland		6/27/47	Lew Jones Const. Co.	Overcrossing	$155,670	$18,500	*$174,170
14WC9	Alameda	69	Oak	At Fruitvale Ave.		12/ 9/46	S. J. Ameroso Const. Co.	Substructure of Overcrossing	390,075	40,000	*430,075
4TMC3	Alameda	69	Oak	Cypress St. from Dist. Struct. to Seventh St.		3/11/46	Lee J. Immel	Widen & Surface	150,410		150,410
14TC31-F	Alameda	69	Oak	19th Avenue		10/22/47	Carl N. Swenson, Inc.	Overcrossing & Approaches	350,470	32,800	*383,270
O-14TC37-F	Alameda	69	Oak	Elmhurst Cr., Damon Slough, & East Creek Slough		4/ 1/48	E. H. Peterson & Son	Construct 3 Bridges	240,545	16,251	*256,796
4T102	Alameda	69	Oak	14th and 23rd Avenues		3/17/48	Day Labor	Storm Drains	45,500		45,500
14WC12-F	Alameda	69	Oak	At Fruitvale Ave.		8/13/47	J. H. Pomeroy & Co., Inc.	Superstructure for Steel Overcrossing	635,286	18,228	653,514
14WC10-F	Alameda	69	Oak	At 23rd Ave.		6/16/47	A. Soda & Son	Overcrossing	468,475	30,173	498,648
O-4TTC4	Alameda	105	B	East 14th St.		11/19/48	L. H. Leonardi Elec. Const. Co.	Signals & Lighting	41,176	2,845	*44,021
4WC27	Alameda	105	B	On E. 14th St. Bet. Plaza Dr. & 158th Ave.		12/10/46	Wheeler Const. Co.	R. C. Culvert	11,716	2,826	14,542
14WLC33	Alameda	107	A	At Alameda Creek		6/22/46	R. G. Clifford & Louis Biasotti & Son	Bridge & Overcrossing	406,796	40,000	*446,796
13T1	Alameda	227	Oak	Route 75 to Park Blvd.	2.3	8/26/48	Day Labor	Grade, Pave & Structures	375,000		375,000
4ANC14	Alameda	Oak.	Airport	Bet. Maitland Dr. & Earhart Rd. in Aux. Naval Air Sta.	0.2	7/10/46	Gallagher & Burk	Repair with P.M.S. & Construct Shldrs.	4,150	804	4,954
4DC11	Alameda	FAS 1023		On Jarvis Rd. bet. Dumbarton Rd. & Route 69	3.4	7/29/48	Clements & Co.	Surfacing	158,927	5,000	*163,927
4DC1	Alameda	FAS 1030		On "A" St. & Redwood Rd. Bet. San Lorenzo Cr. Bridge & Proctor Rd.	2.7	7/26/46	Hayward Bldg. Matl. Co.	Grading & Surfacing	144,486	1,534	146,020
O-4TTC5P	Ala, S.M.	Var	Var	Various Locations		12/ 3/48	R. O. Ferguson Co.	Signals & Lighting	29,643	2,900	*32,543
	Alameda			Various Locations				Minor Contracts & D.L. Projects	42,348		42,348
	Alpine			Various Locations				Minor Contracts & D.L. Projects	350		350
10WC18P	Amador	34, 65	Jkn, C	North of Jackson to East & South of Jackson	2.3	6/ 9/47	Fredrickson Bros.	Grade, Surface & Structures	543,649	57,955	601,604
14WLC52	Ama, Cal	65	C, A	See Calaveras							

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
10DC2	Amador	FAS 951		3.7 Mi. Ely of Pine Grove to No. Fork Mokelumne River	4.7	7/30/47	A. Teichert & Son, Inc.	Grade & Surface	$196,617	$26,100	*$222,717
	Amador			Various Locations				Minor Contracts & D.L. Projects	9,021	20	9,041
O-3TC51P	But, Sut	3	A, Grd, A, LiO	See Sutter County							
3TC24	Butte	3	B,C,Chc	Bet. Oroville Wye & Nelson, Bet. Durham R.R. Xing & Chico, & Bet. Big Chico Creek & Sixth St. in Chico	11.8	5/16/46	Lester L. Rice	P.M.S. on C.R.B. & Construct Shldrs.	108,024	7,052	115,076
O-3TC49P	Butte	3, 47	C, Chc, D, Chc	3 Locations, in and near Chico	15.6	4/ 1/48	McGillivray Const. Co.	Grade & Surface	170,310	7,741	178,051
2T42	Butte	21	C	Jarboe Pass-Plumas County Line	1.5	4/17/47	Day Labor	Resurfacing	6,477	71	6,548
14DC3	Butte	FAS 1046		Across South Fork of Feather River at Bidwell's Bar		3/26/47	Dey Contracting Co.	Bridge	106,033	9,400	*115,433
	Butte			Various Locations				Minor Contracts & D.L. Projects	7,435	21	7,456
O-10TC33	Calaveras	24	B	2.6 Mi. E. to 4.9 Mi. E. of Valley Springs	4.2	4/29/48	A. Teichert & Son, Inc.	Surfacing	104,733	6,817	111,550
14WLC35	Calaveras	24	Ang	Across Angels Creek		6/24/46	J. Henry Harris	Concrete Bridge & Approaches	39,007	4,285	43,292
14WLC52	Cal, Ama	65	A, C	Across Mokelumne River		6/ 4/47	Charles Scott	Bridge Repair	6,515	529	7,044
14WC7	Calaveras	65	B	About 9 Mi. N. of Angels Camp		6/11/46	Bati Rocca	Construct Cattle Pass	4,787	1,548	6,335
10AN15	Calaveras	Access		Bet. Sandy Gulch Mill Pond & J. P. Lodge Rd.		5/22/45	Purchase Oil & Provide Engineering		5,450		5,450
10AN21	Calaveras	Access		Toyon to West Point	15.6	10/18/46	Day Labor	Repairs	26,107	828	*26,935
10DC1	Calaveras	FAS 952		Route 65 to Mountain Ranch	8.9	7/11/47	Louis Biasotti & Son	Grade & Surface	171,770	16,600	*188,370
	Calaveras			Various Locations				Minor Contracts & D.L. Projects	6,810		6,810

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
3T66	Colusa	7	A	Arbuckle to 0.6 Mi. S. of Geneva	3.0	5/12/47	Day Labor	Improve Shldrs.	$10,834	$1,000	*$11,834
3TC22	Colusa	7	A, B	Bet. 3 Mi. N. of Arbuckle & 4 Mi. S. of Williams	3.3	2/ 5/46	Harms Bros.	Grading & Plant Mixed Surfacing	220,143	34,347	254,490
3TC31	Colusa	7	Wms	Bet. 239 Ft. S. of "F" St. & "D" St. in Williams	0.3	8/19/46	Harms Bros.	Repairs with P.M.S.	4,805	457	5,262
14DC10	Colusa	FAS 758		Sacramento River at Colusa		4/21/47	Lord & Bishop	Repair Bridge	133,585	6,878	140,463
3DC7	Colusa	FAS 1033 1035 1036		Williams to Stone Corral Creek	8.6	9/23/47	Frederickson & Kasler	Grade & Imported Borrow	83,300	790	84,090
	Colusa			Various Locations				Minor Contracts & D.L. Projects	5,151	147	5,298
COF-8	C.C, Sol	7	A, F	On Carquinez Bridge		3/25/47	Minton & Kubon	Railings	26,296		*26,296
COFC1	Contra Costa	11	A	San Joaquin River at Antioch		6/8/48	H. F. Lauritzen	Repair Bridge	4,456		4,456
4TC23	C.C-Ala	14, 69		See Alameda County							
4TC29	Contra Costa	14	A	At San Pablo Bet. Wildcat Cr. & San Pablo Cr.	1.0	8/24/46	J. R. Armstrong	Widening & Paving	87,964	24,169	112,133
O-4TTC1P	Contra Costa	14	A	San Pablo Ave. at 13th St.		8/ 5/48	H. C. Reid & Co.	Signals & Lighting	10,110	475	10,585
4TC31	Contra Costa	14	B	Bet. Fourth St. & First St. in Rodeo	0.3	10/14/46	Lee J. Immel	Widen & Pave with A. C.	16,815	2,566	19,381
4T50	Contra Costa	14	B	At Second St. & Parker Ave.		11/19/46	Day Labor	Traffic Signals	5,090	404	5,494
4TC38	Contra Costa	14	B	At Rodeo Bet. Sixth St. & Fourth St.	0.3	5/28/47	Morgan Construction Co.	Widen with A. C. & Construct Shldrs.	11,527	1,960	13,487
4TC40-P	Contra Costa	14	ECr, Rch	In El Cerrito & Richmond on San Pablo Ave. at 10 Intersections, Bet. Stockton Ave. & McBryde		6/24/47	Severin Electric Co.	Traffic Signals	59,318	3,860	*63,178
O-4TC61	Contra Costa	14	Her, B	Pinole Overhead to East of Rodeo	1.5	6/30/48	J. Henry Harris	Grade, Pave & Structure	112,337	12,321	124,658
4W39	Contra Costa	69	ECr	Potrero Ave.		11/ 1/46	Day Labor	Signals	8,250	600	*8,850
O-4TMC15	Contra Costa	69	Rch	Cutting Blvd. to 24th St.	1.0	3/ 1/49	Lee J. Immel	Resurfacing	21,734	3,800	*25,534

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
4W31	Contra Costa	75	A	At Oakland St. & Moraga Rd.		8/14/46	Day Labor	Signals	$15,332	$798	*$16,130
4WC25	Contra Costa	75	A, B	Bet. Broadway Tunnel & 3.5 Mi. E. of Walnut Creek	5.3	6/25/46	N. M. Ball Sons	Repair with Imported Borrow & P.M.S.	25,177	3,942	29,119
4WC26-F	Contra Costa	75	B, C	Bet. Junct. Rte. 106 to 1 Mi. E. of Port Chicago Rd.	2.6	6/28/46	Harms Bros.	Grade & Pave	599,379	78,000	*677,379
4WC23	Contra Costa	75	C, D	Bet. Pittsburg & 4 Mi. E. of Brentwood	10.1	4/22/46	Lee J. Immel	Widen Shoulders & Bridge	82,463	9,422	91,885
I-4TC80	Contra Costa	75	D	S.E. of Brentwood Jct. to Byron Rd.	1.4	4/ 1/49	C. M. Syar	Surfacing	53,818	9,500	*63,318
O-4TC59	Contra Costa	75	D	Old River Bridge	0.2	6/18/48	J. R. Armstrong	Base and Surface	77,361	9,864	87,225
4AWC2	Contra Costa	75, 106	E, Cnd, C	Bet. Concord Ave. & 0.4 Mi. W. of Ohmer Station	2.3	3/12/46	Guy F. Atkinson Co.	Grade & P.C.C. Pavement	225,687	36,716	262,403
O-4TTC2	Contra Costa	75, 106	WlC, C	Main St. at Mt. Diablo Blvd. & Ygnacio Ave. in Walnut Creek & on Rte. 106 at Pacheco Rd.		8/16/48	Tri-Cities Elec. Service	Signals and Lighting	26,719	3,196	29,915
O-4TC64	Contra Costa	106	A	Christie U.P. to Glen Frazer Station	1.7	6/29/48	Fredrickson & Watson Const. Co.	Grade and Surface	367,819	38,053	405,872
O-4TC57	Contra Costa	107	A	Alameda C. Line to 0.2 Mi. S. of San Ramon Cr.	4.2	5/25/48	Granite Const. Co.	Grade and Surface	180,282	16,155	196,437
4W50	Contra Costa	106	C	Bet. Muir Sta. & Rte. 75	1.0	3/31/47	Day Labor	Resurfacing	18,353	529	18,882
4WC29-P	C.C, Ala	107, 5	A, B	See Alameda County							
14DC9	Contra Costa	FAS 797		Across Pacheco Slough		4/14/47	Duncanson-Harrelson Co.	Swing Bridge	217,938	13,349	231,287
	Contra Costa			Various Locations				Minor Contracts & D.L. Projects	9,514		9,514
1T44	Del Norte	1	A	High Prairie Creek		9/10/47	Day Labor	Repair Bridge	5,898	162	*6,060
1T45	Del Norte	1	A	At Hunter Creek		11/17/47	Day Labor	Redeck Bridge	6,484	184	*6,668
1TL7	Del Norte	1	A	At Panther Cr. Bridge Br. No. 1-25		9/28/45	Day Labor	Repair Bridge	6,212	111	6,323
1TC13	Del Norte	1	B	Bet. 6.3 Mi. & 2.6 Mi. S. of Crescent City	3.7	5/ 3/46	W. C. Railing	Imp. Base Mat'l. & Seal Coat	105,329	9,330	114,659

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
O-1TC30	D.N., Hum	1	K, A	See Humboldt County							
	Del Norte			Various Locations				Minor Contracts & D.L. Projects	$3,320	$40	$3,360
3TC23-F	El Dorado	11	B	Bet. Shingle Springs & 1.25 Mi. W. of El Dorado	3.4	2/19/46	Utah Construction Co.	Grading & Plant Mixed Surfacing	271,229	47,350	*318,579
3T84	El Dorado	11	F	Pacific House Curve	0.1	4/15/48	Day Labor	Widen Curve	5,826		5,826
14WLC41	E.D., Pla	65	A, A	See Placer County							
3W17	El Dorado	93	A	Bet. Rte. 65 near Placerville & Pino Grande Rd.	3.2	1/24/46	Day Labor	Widen, Improve Alignment & Oil Treat	29,913	2,393	32,306
3DC2	El Dorado	FAS 1099		Georgetown to U.S. Ranger Station	3.6	6/26/47	Miles & Bailey	Grade & Surface	73,507	10,621	84,128
	El Dorado			Various Locations				Minor Contracts & D.L. Projects	16,613		16,613
6TC4-F	Fresno	4	A,Fow,B	Bet. ¼ Mi. S. of Fowler & Calwa Overpass	6.5	10/ 8/46	Gunner Corporation & J. E. Haddock, Ltd.	Grade & Plant Mixed Surfacing	804,567	71,673	*876,240
6TC7	Fresno	4	A,Fow,B	Bet. ¼ Mi. S. of Fowler & Calwa Overpass	6.4	8/27/47	F. Gunner Gramatky	Barrier Curbs	16,509	1,400	17,909
O-6TC15	Fresno	4	A	Bet. Selma and Fowler	3.4	7/29/48	Matthew & Jorgenson	Barrier Posts	9,742	1,458	11,200
6GTC1-FP	Fresno	4	B,Fre	Fresno City Limits to San Benito Ave.	1.2	6/30/47	Guy F. Atkinson Co.	Grade, Pave, & Structure	1,366,751	143,612	*1,510,363
6TC3	Fresno	4	B, Fre	Bet. Calwa Overpass & Fresno	2.1	1/17/46	Marshall S. Hanrahan	Grading & P.C.C. Pavement	374,675	43,700	418,375
6WC6-P	Fresno	4, 125	B, A	Bet. Fowler & Calwa Overpass & Bet. 4.6 Mi. N. of Kings County Line & Mountain View Ave.	11.0	4/ 2/47	Gunner Corporation	Resurface with Plant Mix Surfacing	110,364	9,000	119,364
6TC11-P	Fre, Tul	4	Kngb, A E, D	See Tulare County							
6TC8-P	Fre, Tul	4	Kngb, A E, D	0.5 Mi. S. of Kingsburg to Selma	5.2	10/20/47	N. M. Ball & Sons	Grade & Pave	631,900	69,000	*700,900
6TMC1-P	Fresno	4	Fow	Merced St. & Rte. 4		12/31/47	Severin Elec. Co.	Signals & Lighting	13,364	1,290	*14,654
O-6TC13	Fresno	4	Fre, C	Belmont Circle to Clinton Ave.		5/19/48	Tri-Cities Elec. Serv.	Signals & Lighting	19,956	1,310	21,266
O-6TC12	Fresno	4	Fre, C	Belmont Circle to Clinton Ave.	1.8	4/15/48	Guy F. Atkinson Co.	Grade & Pave	226,533	26,428	252,961
14WLC43	Fresno	41	P	Across Kings Slough		1/ 8/47	Lord & Bishop	Reconstruct Bridge	21,573	1,098	22,671

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
14WLC27	Fresno	41	P	Bet. 2 Mi. E. of Mendota & 2 Mi. W. of Tranquility Rd.		12/21/45	Dan Caputo & Edward Keeble	12 R.C. Bridges & R.C. Box Culvert	$194,189	$14,433	$208,622
14WLC60	Fresno	41	M	Across Colony & Helm Canals		9/ 5/47	E. G. Perham	Reinforced Concrete Bridges	49,805	4,029	53,834
6T22	Fresno	41	S	Alta Main Canal		11/12/48	Day Labor	Redeck Bridge	6,994		6,994
6W8	Fresno	76	B	At Big Dry Creek, Br. No. 42-91		9/13/46	Day Labor	Widen Bridge with R.C. Slab	7,303	25	7,328
6WC5-F	Fresno	125	C	Bet. Shields Ave. & Herndon Ave.	4.0	11/14/46	Basich Bros. Const. Co. & Basich Bros.	Grade & Pave	339,278	33,800	*373,078
6DC5	Fresno	FAS 568		Highland Ave. Bet. Kings Co. Line & Elkhorn Ave.	3.3	6/ 7/47	Valley Paving & Const. Co.	Grading & Surfacing	142,214	8,723	150,937
6DC17	Fresno	FAS 568		Elkhorn Ave. to Rte. 4	6.4	1/26/49	Phoenix Const. Co. & Oilfields Trucking Co.	Grade & Surface	215,720	35,700	*251,420
14DC12	Fre, Kin	FAS 623		See Kings County							
6DC1	Fresno	FAS 809		On Fresno-Coalinga Rd. Bet. Mt. Whitney Ave. & State Highway Rte. 10	8.6	11/13/46	Louis Biasotti & Son	Grade & Surface	153,818	1,550	155,368
14DC16	Fre, Mad	FAS 811		Across San Joaquin River & Overflow at Firebaugh		5/19/47	Charles MacClosky Co.	2 Steel Bridges	251,944	26,200	*278,144
6DC16	Fresno	FAS 814		On Clovis Ave. Bet. Ventura Ave. & Shaw Ave.	5.0	11/ 9/48	Ted F. Baun	Widen & Surface	144,069	15,200	*159,269
6DC3	Fresno	FAS 823		On Reed Ave. Bet. Manning Ave. & Rte. 41	8.0	5/16/47	A. Teichert & Sons, Inc.	Grade & Surface	197,337	14,035	211,372
6DC9	Fre, Tul	FAS 1142		0.1 Mi. W. of Tulare County Line to 1 Mi. E. of Kings River	1.9	2/27/48	P. J. Moore & Son & Harms Bros.	Grade & Bit. Surf. Treat	59,156	4,312	63,468
	Fresno			Various Locations				Minor Contracts & D.L. Projects	24,982	64	25,046
14WLC61	Glenn	45	B, C	Sacramento River & Razor Slough		9/17/47	Judson-Pacific-Murphy Corp.	Bridge Superstructure	233,897	18,900	*252,797

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
14WLC46	Glenn	45	B, C	Sacramento River & Razor Slough	0.6	2/26/47	Johnson-Western Co.	Bridge Substructure & Appr.	$391,458	$40,474	$431,932
O-14TC36	Glenn	45	C	Sacramento Riv. Overflow & Campbell Slough		4/ 1/48	Chas. MacClosky Co.	Redeck 2 Bridges	75,874	11,500	*87,374
3WL23	Glenn	47	A	Glenn-Colusa Canal, Br. No. 11-18		2/21/46	Day Labor	Repair Substructure	7,268	32	7,300
3DC4	Glenn	FAS 531		Willows to Athena	8.5	7/23/47	H. Earl Parker, Inc.	Grade, Surface & Bridge	123,227	12,161	135,388
14DC43	Glenn	FAS 1117		At Salt Creek		9/29/48	George M. Carr & Bati Rocca	R.C. Bridge	17,727	2,436	20,163
14DC33	Glenn	FAS 1119, 1120, 1121, 1122		Across Central & Provident Canals at various locations		12/19/47	Erickson, Phillips, & Weisberg	8 R.C. Bridges	174,055	14,105	188,160
	Glenn			Various Locations				Minor Contracts & D.L. Projects	200		200
1TC20	Humboldt	1	D, E	Bet. Jordan Cr. & South Scotia Bridge	1.2	6/12/47	Clements & Co.	Plant Mixed Surfacing & Seal Coat	30,649	3,400	*34,049
1TC18	Humboldt	1	E	Bet. Greenlaw Bluffs & Scotia	3.2	4/ 2/47	Clements & Co.	Plant Mixed Surfacing & Seal Coat	90,289	9,000	*99,289
1TC11	Humboldt	1	G	Bet. Loleta & Field's Landing	4.0	4/16/46	Mercer-Fraser Co.	Reinforce Base & P.M.S.	93,955	9,064	103,019
1TC8	Humboldt	1	G, I, J	Bet. Loleta & Patrick's Point	7.5	5/21/45	Mercer-Fraser Co.	Repair with Imp. Base & P.M. Bit. Matl.	181,755	18,869	200,624
14TC51	Humboldt	1	H	Eureka Slough		6/28/48	Tom Hull	Reconstruct Bridge Fenders	18,004	3,000	*21,004
1TC12	Humboldt	1	J	Bet. Patrick's Point & Big Lagoon	3.4	4/30/46	Mercer-Fraser Co.	P.M.S. on Imp. Matl. Base	98,347	6,865	105,212
O-1TC23	Humboldt	1	K	2.8 Mi. to 7.6 Mi. N. of Orick	4.8	4/ 1/48	Mercer-Fraser Co.	Grade & Surface	172,280	17,900	*190,180
O-1TC30	Hum, DN	1	K, A	2 Mi. S. to 5 Mi. N. of Hum.-D.N. County Line	2.5	8/17/48	Harms Bros. & C. M. Syar	Base & Surface	121,313	12,300	*133,613
O-1TMC2	Humboldt	1	Eur	S. City Limits to Eureka Slough Bridge	2.6	7/16/48	Mercer-Fraser Co.	Resurfacing	86,260	7,858	*94,118
14WLC28-F	Humboldt	20	A	At Mad River		1/ 5/46	Mercer-Fraser Co.	Bridge & Approaches	215,600	27,500	*243,100

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
1WC12-F	Humboldt	20	B	Bet. 1.2 Mi. E. of Korbel Rd. & 2.7 Mi. E. of Redwood Summit	10.0	3/26/47	W. C. Railing	Base & Stockpile Screenings	$97,418	$7,604	*$105,022
1W25	Humboldt	20	B, C	Bet. Blue Lake & 1 Mi. E. of Redwood Creek	16.4	9/17/46	Day Labor	Grading & Seal Coat	193,655	6,901	*200,556
1WC11	Humboldt	20	B, C	Bet. Redwood Summit & 1 Mi. E. of Redwood Cr.	4.7	10/25/46	W. C. Railing	Imported Base Material	59,973	2,775	62,748
14WLC51	Humboldt	20	C	Across Redwood Creek		5/28/47	Osborne Engr. Co.	Repair Steel Truss	11,518	800	*12,318
14WLC59	Humboldt	20	C	Across Redwood Creek		6/30/47	Tom Hull	Erect Steel Truss Span	15,546	2,500	*18,046
41W10	Hum, Tri	20	D, C, D	Bet. Willow Cr. & Crossing of Trinity River		1/23/42	Prison Labor	Const. Camp; Grade & Surface	1,115,364	88,905	*1,204,269
1WL28	Humboldt	35	B	At Slide Bridge		8/14/46	Day Labor	Replace Bridge	6,015		6,015
14WLC50-F	Humboldt	84, 46	B, C, D	At Klamath River	0.5	5/12/47	Clifford A. Dunn	Bridge Substructure & Appr.	280,385	32,500	*312,885
1DC1	Humboldt	FAS 501		Bet. Arcata & Ryans Slough Bridge	8.0	10/ 3/46	Mercer-Fraser Co.	Grade & Surface	193,802	18,400	*212,202
1DC4	Humboldt	FAS 968		Bet. Jct. Rte. 20, E. of Blue Lake & Korbel	1.3	5/24/47	Mercer-Fraser Co.	Grade & Surface	56,118	5,485	*61,603
1DC2	Humboldt	FAS 970		On Elk River Rd. Bet. Junct. with Rte. 1, S. of Eureka & Elk River School	2.2	3/26/47	Mercer-Fraser Co.	Grade & Seal Coat	62,508	6,000	*68,508
14WC14-F	Humboldt			In Whittemore Grove State Park across S. Fork of Eel River near Redway		9/16/47	Reed & Tuttle	Repair Bridge	42,034	5,900	*47,934
	Humboldt			Various Locations				Minor Contracts & D.L. Projects	20,441		20,441
O-14VC71	Imperial	12	A, B, C	10 Mi. to 25 Mi. W. of El Centro		9/29/48	R. M. Price & O. B. Pierson	Redeck 15 Bridges	108,294	11,700	*119,994
14VC46	Imperial	12	B	Across Apache Wash & Sandy Ditch		1/26/48	E. G. Perham	Redeck 2 Bridges	29,517	4,000	*33,517
11VC15-F	Imperial	12, 26	E, ECn, F, Imp,G,Brw	El Centro to Brawley	13.1	5/16/47	Basich Bros. & Basich Bros. Const. Co.	Grade & Surface	1,514,588	151,000	*1,665,588
11V48	Imperial	12, 26	E, ECn, F, Imp,G,Brw	El Centro to Brawley	13.1	5/18/48	Day Labor	Signs & Stripe	5,192		5,192

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
11VC18	Imperial	26	A, B, C	Trifoleum Canal to Sandy Beach Rd.	15.1	9/22/47	R. A. Erwin & Cee Tee Const. Co.	Resurface Bridge	$433,578	$56,000	* $489,578
14VC16-F	Imperial	26	B, C	At Lone Tree Wash & San Felipe Creek		10/31/46	Bent Const. Co.	Bridge & Approaches	254,058	17,765	271,823
11XC12	Imperial	26, 27	J, ECn	Bet. Calexico & El Centro & in El Centro	12.7	8/ 7/46	Tanner Const. Co.	Grade Portions, Improve Shldrs. & Plant Mixed Surfacing	237,389	26,799	264,188
O-11VMC15-P	Imperial	26, 187	Clx, Brw	In Calexico & Brawley	3.2	8/13/48	Basich Bros. & Basich Bros. Const. Co.	Resurfacing	94,298		*94,298
11VC20-P	Imperial	26	ECn	Intersections of Fourth St. with Main St. & Eighth St. with Adams Ave. in El Centro		1/20/48	C. E. Seymour	Traffic Signal Systems	19,554	2,000	*21,554
11VC14-F	Imperial	26	ECn	On Fourth St. & Adams Ave., Bet. Main St. & Imperial Ave.	1.2	1/28/47	R. E. Hazard Const. Co.	Grade & Pave	347,975	40,500	*388,475
11VC34	Imperial	26	ECn, Imp	In El Centro & Imperial		6/29/48	California Elec. Works	Signals & Lighting	20,632	2,400	*23,032
14VC35	Imperial	27	B	Bet. Grays Wells & Winterhaven		9/ 8/47	C. B. Tuttle Co.	Repair 12 Bridges	54,192	5,500	*59,692
14VC18	Imperial	27	B	Near Winterhaven		8/30/46	Tanner Const. Co.	Repair 8 Bridges	54,453	4,691	59,144
O-14VC60	Imperial	27	D, A	East High Line Canal	0.5	6/29/48	Basich Bros. & Basich Bros. Const. Co.	Bridge & Approaches	112,582	16,500	*129,082
O-14VC72	Imperial	198	A	Condit & Bondit Ditches		9/29/48	R. M. Price & O. B. Pierson	2 R.C. Bridges	25,252	5,000	*30,252
O-11VC26	Imperial	201, 187	ABC, C	Rte. 26 to Calipatria & Curlew to Alamorio	6.6	4/ 9/48	MacArthur & Son	Resurfacing	80,310	8,250	*88,560
11XC18	Imperial	201 187	A, B, C A, B, C	Bet. Jct. Rte. 26, 1.5 Mi. E. of Heber & 1.9 Mi. S. of Calipatria & Bet. 3.6 Mi. N. of Bond's Corner & Alamorio	12.0	6/30/47	MacArthur & Son	Repair with Road Mixed Surface	80,582	9,000	*89,582
14VC38	Imperial	202	A, B	At New River & Greeson Wash	0.16	10/20/47	G. W. Peterson	Bridges & Approaches	54,697	8,300	*62,997
11X35	Imperial	202	C	At Briar & Central Main Canals		12/ 9/46	Day Labor	Lengthen Central Canal Bridge & Place Embankment Protection at Both Structures	8,750	12	8,762
	Imperial			Various Locations				Minor Contracts & D.L. Projects	14,573	2	14,575
9VC6-F	Iny, Ker	23	G, E	See Kern County							
9VC11	Inyo	23	H, I	From 2.0 Mi. S. to 10.7 Mi. S. of Olancha	0.4	1/21/48	Bishop Engr. & Const. Co.	Grade & Bit. Surf. Treatment	12,669	2,517	15,186

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
9VC10-F	Inyo	23	L, M	Alabama Gates to Manzanar	4.3	12/18/47	Basich Bros. Const. Co. Basich Bros. & O. B. Pierson	Grade, Surface & Structures	$223,217	$27,500	*$250,717
9RXC1	Inyo	76	A	Bet. Laws & Mono County Line	-----	9/18/47	Bishop Engr. & Const. Co.	Construct Fence	6,146	821	6,967
9XC4	Inyo	76, 127	A, Bis, C	Bet. Rte. 23 & Mono County Line, in Bishop, Bet. W. City Limits & Rte. 23 & Bet. Rte. 23 & Keeler	3.2	5/16/47	Browne & Krull	Road Mix Surfacing	17,539	2,215	19,754
9VC9	Inyo	127	N	At Shoshone	0.7	11/13/47	A. A. Edmonson	Grade & Road Mix Surfacing	26,455	5,198	31,653
9DC5	Inyo	FAS 1065	----------	N. of Trona to Water Canyon	4.9	1/15/48	Swedlow Engr. Co., Inc.	Grade & Bit. Surf. Treat.	126,777	22,300	*149,077
9DC8	Inyo	FAS 1065	----------	N. of Trona to Wild Rose Canyon	15.0	12/14/48	Arthur A. Johnson	Grade & Pen. Treat.	88,212	15,200	*103,412
9DC6	Inyo	FAS 1068	----------	Independence to Kearsarge	4.5	1/26/48	Brown & Krull	Grade, Pen. Tr., & Widen Bridge	47,121	6,853	53,974
9DC1	Inyo	FAS 1070	----------	Near Bishop, on Warm Springs Rd. & Poleta Rd	4.4	5/16/47	Basich Bros. Const. Co. & Basich Bros.	Grade, Surface, & 2 Bridges	116,915	8,861	125,776
9DC4	Inyo	FAS 1071, 1069	----------	On Pine Cr. Rd. & Glacier Lodge Rd.	4.2	9/22/47	Westbrook & Pope	Grade & Surface	79,874	11,292	91,166
----------	Inyo	-------	----------	Various Locations	-----	--------	----------	Minor Contracts & D.L. Projects	14,255	4	14,259
6VC6	Kern	4	A	Bet. 1.6 Mi. & 1.25 Mi. S. of Grapevine Station	-----	5/16/46	Griffith Company	Traffic Deflector	21,130	2,350	23,480
O-6VC17	Kern	4, 140	B, C, B	Grapevine to Switzers & Mi. 6.74 to Rte. 4	29.8	4/10/48	Dicco, Inc. & Dix-Syl Const. Co., Inc.	Grade & Surface	377,334	35,300	*412,634
6VC5	Kern	4	C, Bkd	Bet. Brundage Lane & 24th St.	1.9	4/22/46	Griffith Company	Grade & P.C.C. & A.C. Paving	435,612	48,101	483,713
6VC11-FP	Kern	4	C, Bkd	Bet. Brundage Lane & 21st St.	-----	10/23/46	Oilfield Electric Co.	Traffic Signals	42,581	4,971	47,552
6VC7	Kern	4	D, E	Bet. Standard Oil Tank Farm & Cawelo	-----	5/ 7/46	Geo. Von Kleinsmid	Barrier Posts	7,028	2,800	9,828
O-6VC28	Kern	4	D, E	Snow Rd. to Cawelo	4.2	8/ 5/48	C.J.B. Const. Co.	Barrier Posts	11,770	1,369	13,139

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
6VC10-F	Kern	4	E	Bet. Cawelo & Famoso Underpass	6.7	10/17/46	Griffith Company	Grade & Pave	$517,023	$53,332	$570,355
6VC18	Kern	4	E	Cawelo to Famoso U.P.	6.4	4/19/48	E. G. Perham	Barrier Posts	20,552	2,827	23,379
6VC8	Kern	4	F, Dln	Bet. Famoso & Cecil Ave. in Delano	10.4	5/27/46	Griffith Company	Repair with P.M.S.	93,215	8,478	101,693
6VC25	Kern	4	G, D	Minkler U.P. to Snow Rd.	1.4	6/28/48	Dicco, Inc. & Dix-Syl Const. Co., Inc.	Surfacing	14,324	1,178	15,502
6VC13-FP	Kern	4, 141	BKd, G, D, A	Bakersfield to Snow Rd. & Calloway Canal to Rte. 4	3.6	6/ 9/47	Griffith Co.	Grade, Pave, & Structure	1,241,679	141,300	*1,382,979
O-9VC16	Kern	23	A	In Mojave		2/21/49	G & H Paving Co.	Railing	6,421	1,194	*7,615
O-9VC13	Kern	23	C	Ittners to Ricardo	2.4	5/12/48	Westbrook & Pope	Grade & Surface	38,198	6,000	*44,198
9VC4-F	Kern	23	D	At Freeman Gulch		2/19/46	E. W. Elliott Const. Co.	Bridge & Approaches	77,962	14,815	92,777
9VC6-F	Ker, Iny	23	E, G	Bet. Indian Wells & Little Lake	2.7	4/21/47	Basich Bros. Const. Co. & Basich Bros.	Grade, Surface, & Bridge	203,937	19,477	223,414
6X14	Kern	33	B	Bet. Blackwells Corner & Harts Sta.		3/21/46	Day Labor	Restore Borders	16,996	25	17,021
6XC7	Kern	33	C	Bet. Lost Hills & Wasco	4.7	4/ 5/46	Oilfields Trucking Co. & Phoenix Const. Co.	Widen Shldrs.	25,813	4,198	30,011
6XC8	Kern	33	C	Bet. 8.7 Mi. & 2.0 Mi. W. of Wasco	6.7	6/24/46	Griffith Company	Repair with P.M.S. & Seal Coat	54,324	7,000	61,324
6XC13-P	Ker, Tul	33, 4	D, A	See Tulare County							
6X21	Kern	57	A	Bet. South Boundary & Maricopa	2.4	3/20/47	Day Labor	Resurfacing	17,233	250	17,483
6X25	Kern	57	C	At Tecuya Creek		5/ 1/47	Day Labor	Arch Culvert	9,798	152	9,950
6XC15	Kern	57	E	Bet. 0.4 Mi. W. of Cottonwood Cr. & Cottonwood Cr.	0.4	6/17/47	James E. Anderson	Scarify & Suboiling	4,520	900	*5,420
6V40	Kern	57	I	Bodfish Creek		7/ 1/48	Day Labor	Culvert	9,985	138	10,123
6VC16-Y	Kern	57	I	2 Mi. S. of Isabella to Isabella	2.0	3/11/48	Munn & Perkins & Matthew & Jorgenson	Grade, B.S.T. & Bridge	147,089	20,068	167,157
O-14VC63	Kern	57	K	Canebrake Creek		8/18/48	Bishop Engr. & Const. Co.	Bridge & Approaches	15,633	4,300	*19,933

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
9VC5-F	Kern	58	A	Bet. 12 Mi. E. of Mojave & Muroc Jct.	5.0	1/28/47	Basich Bros. Const. Co. & Basich Bros.	Grade & Plant Mixed Surfacing	$148,886	$14,414	$163,300
O-9VC15	Kern	58	A, B	Mojave to San Bernardino County Line	11.5	8/23/48	Oilfields Trucking Co. & Phoenix Const. Co.	Grade & Surface	149,695	17,600	*167,295
9VC8	Kern	58	B	Bet. Muroc Jct. & 6.5 Mi. E.	6.5	5/ 7/47	Basich Bros. Const. Co. & Basich Bros.	Repair with Road Mixed Surf.	31,114	1,907	33,021
14VC39	Kern	58	D	Across Walker Basin Cr. & Caliente Cr.	-----	11/20/47	N. M. Saliba Co.	Redeck 3 Bridges	30,720	4,700	*35,420
6XC11-F	Kern	58	E, F, Thpi	Bet. Keene & Tehachapi	10.2	12/31/46	Guy F. Atkinson Co.	Grade, Surface & Bridges	1,145,913	87,000	*1,232,913
14XC23-F	Kern	58	E, F	Between Keene & Tehachapi	-----	8/15/47	Guy F. Atkinson Co.	2 Bridge Superstructures	391,055	23,000	*414,055
O-6VC29	Kern	58	F	¼ Mi. E. of Tehachapi	0.2	9/ 8/48	Oilfields Trucking Co. & Phoenix Const. Co.	Culvert & Grade	17,353	2,472	19,825
6VC19	Kern	58	G	½ Mi. E. of Monolith	0.2	4/19/48	Oilfields Trucking Co. & Phoenix Const. Co.	Grade & Surface	20,012	3,000	*23,012
14XC8	Kern	58	G	Across Cache Cr. & Los Angeles Aqueduct	-----	12/11/45	E. W. Elliott Const. Co.	Plate Girder & R.C. Bridges	90,355	11,862	102,217
14VC40	Kern	58	K	Across Main Drainage Canal	-----	12/11/47	E. G. Perham	Reinforced Concrete Bridge	22,355	4,100	*26,455
6XC16	Kern	58	L	On Oak St. at Bakersfield	-----	6/30/47	Rexroth & Rexroth	Remove Girder Bridge	12,220	462	12,682
6XC9-F	Kern	129	A	Bet. Rte. 4 & 5 Mi. N.	5.1	10/14/46	Geo. E. France	Grade & Surface	185,528	26,900	*212,428
14VC57	Kern	129	A	Poso Creek	-----	6/15/48	F. Fredenburg	R.C. Bridge	47,548	6,700	*54,248
O-6VC23	Ker, Tul	129	AB, A	Poso Creek to Ducor	23.9	6/23/48	Clyde W. Wood, Inc.	Seal Coat	22,017	2,527	24,544
6XC10-F	Ker, Tul	129	AB, A	Bet. Poso Cr. & Ducor	18.3	12/23/46	Rand Const. Co.	Grade & Surface	292,712	48,000	*340,712
O-14VC62	Kern	139, 140	A, A	Kern River & Buena Vista Creek	-----	8/ 3/48	Thomas Const. Co.	Const. culvert & Redeck Bridge	26,590	4,400	*30,990
O-6VC26	Kern	140	C	Derby St. to W. of Meyer St.	0.6	8/ 3/48	Griffith Co.	Bit. Surf. Treat.	35,494	6,200	*41,694
1-6VC32	Kern	142	A	Cow Creek	0.1	4/ 1/49	Thomas Const. Co.	Culvert & Approaches	8,296	2,100	*10,396
14DC18	Kern	FAS 575	-----	Across Kern River	-----	5/28/47	O. B. Pierson	R.C. Slab Bridge	82,089	1,087	83,176
6DC2	Kern	FAS 884	-----	On Comanche Dr., Bet. State Hwy. Rte. 58 & 3.3 Mi. S'ly	3.3	5/ 1/47	Rexroth & Rexroth	Grade & Surface	34,962	1,008	35,970

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
6DC15	Kern	FAS 887		Rte. 142 to Rte. 4	2.8	10/28/48	Griffith Co.	Grade & Surface	$157,447	$20,000	*$177,447
6DC14	Kern	FAS 889		Elmo Hwy. to Tulare County Line	7.2	9/24/48	Louis Biasotti & Son	Grade & Bit. Surf. Treat.	150,509	10,000	*160,509
6DC4	Kern	FAS 889		Bet. Wasco & Elmo Hwy.	6.1	6/ 4/47	Rand Const. Co.	Grade & Surface	156,195	7,112	163,307
6DC10	Kern	FAS 895		Rte. 33 to Lerdo Hwy.	8.4	5/27/48	Geo. E. France, Inc.	Grade & Pen. Treat.	224,230	13,000	*237,230
	Kern			Various Locations				Minor Contracts & D.L. Projects	69,028	948	69,976
6WC4	Kings	125	D	Bet. Fifth Std. Parallel & 1.5 Mi. N.	1.5	1/21/46	W. C. Railing	Grading & Road Mix Surfacing	65,617	10,509	76,126
6DC13	Kings	FAS 568		Kings River to Fresno County Line	0.7	8/19/48	Anderson Co.	Surfacing	40,526	3,000	*43,526
14DC12	Kin, Fre	FAS 623		Across Kings River near Hardwick		5/ 1/47	Klay Bennett Const. Co.	R.C. Bridge	119,374	2,500	*121,874
6DC7	Kings	FAS 943		Bet. Corcoran & 5.3 Mi. S.	5.3	11/13/47	C. M. Syar	Grade, C.R.B. & P.M.S.	137,055	5,457	142,512
	Kings			Various Locations				Minor Contracts & D.L. Projects	1,032		1,032
O-14TC43	Lake	15	B	2.6 Mi. E. of Upper Lake		5/27/48	C. C. Gildersleeve	Cattlepass	5,880	1,200	*7,080
1WLC6	Lak, Nap	49	A, A	See Napa County							
14TC41	Lake	49	C	Across Burns Valley Creek		4/21/48	C. C. Gildersleeve	Repair Bridge	4,893	1,300	*6,193
1W28	Lake	49	C	At Burns Valley & Molesworth Creeks		9/19/46	Day Labor	Replace Bridges	7,871	38	*7,909
14WLC49	Lake	89	B, C	At Kelsey Cr. at Cobb		4/24/47	Arthur B. Siri	Bridge & Approaches	33,838	4,454	38,292
14WLC36-F	Lake	89	D	Across Kelsey Cr. at Kelseyville		7/19/46	A. Soda & Son	Bridge & Approaches	210,083	16,986	227,069
1WC10	Lake	89	E	Bet. 1.2 Mi. N. of Rodman Narrows & Rte. 15	2.0	3/26/46	Louis Biasotti & Son	Grading & Plant Mixed Surfacing	155,489	23,540	179,029
14WLC30-F	Lake	89	E	Across Robinson Cr. & Scott Cr.		5/ 7/46	Kiss Crane Co.	Two Bridges	144,290	14,687	158,977
1W30	Lake	89	E	N. of Redman Narrows Rd. to Rte. 15	2.0	2/20/47	Day Labor	Seal Coat	4,654		*4,654

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
1DC5	Lake	FAS 1039		Rte. 89 to 1 Mi. W. of Lower Lake	5.1	8/13/47	Morrison-Knudson Co.	Grade, Imported Borrow & Seal Coat	$115,477	$16,800	*$132,277
1DC6	Lake	FAS 1039		1.0 Mi. to 2.1 Mi. E. of Rte. 89	1.1	11/29/47	George Stout	Imported Borrow & Seal Coat	29,978	3,400	*33,378
	Lake			Various Locations				Minor Contracts & D.L. Projects	8,161		8,161
2TC8	Las, Sha	28	A, B, E	See Shasta County							
2T46	Lassen	28	B	Bieber to Modoc County Line	3.2	6/ 3/47	Day Labor	Surfacing	12,391	76	*12,467
2TC20	Las, Plu	29	A, A	See Plumas County							
2WLC1	Lassen	29	C	At Baxter Creek, N. of Janesville	1.1	8/21/47	Fredrickson & Watson Const. Co.	Grade, Surface, & Structure	101,747	11,200	*112,947
2WC6	Lassen	29	D	Bet. 2 Mi. N. of Milford & Bird Flat	12.4	4/ 9/47	Clements & Co	Plant Mixed Surfacing	130,162	12,387	142,549
2WC4	Lassen	29	D	Bet. 1.5 Mi. W. of Bird Flat & Doyle	7.5	1/17/46	The Utah Construction Co.	Grading & Plant Mixed Surfacing	237,117	26,413	263,530
2WC5	Lassen	73	B	Bet. Viewland & Secret Valley	13.8	4/16/46	E. B. Bishop	Gravel Base & Plant Mixed Surf.	122,258	9,615	131,873
2W37	Lassen	73	E, F, G	Bet. Horse Lake Rd. & Modoc County Line	5.2	12/10/46	Day Labor	Resurfacing	31,934	560	32,494
2WC2	Las, Mod	73, 28 210	Var	Bet. Horse Lake Rd. & Lakeview Jct. & Bet. Alturas & Stronghold	60	4/20/45	A. A. Tieslau & Son	Plant Mixed Bit. Mtl. & Seal Coat	134,589	9,622	144,211
2DC7	Lassen	FAS 988		Susanville to northside Willow Cr. Valley	17.6	7/21/47	A. Teichert & Son, Inc.	Grade & R.M.S.	293,935	31,000	*324,935
	Lassen			Various Locations				Minor Contracts & D.L. Projects	2,959	2	2,961
7VC21	Los Angeles	2	L.A.	On & Adjacent to Santa Ana Parkway Bet. Soto St. & Indiana St.		7/15/46	Mike Radich & Co.	Grade & Construct Storm Drain & Sanitary Sewer	375,885	26,733	402,618
7VC24	Los Angeles	2	L.A.	Bet. Diamond St. & Sunset Blvd.		10/24/46	Chas. T. Brown	Storm Drain & Sanitary Sewer	185,885	11,873	197,758
14VC15	Los Angeles	2	L.A.	On Santa Ana Parkway at First St.		7/19/46	Haddock Co.	R.C. Undercrossing	175,255	7,260	182,515
O-7RVC1	Los Angeles	2	C	E. of Ventura County Line		12/28/48	Thomas Const. Co.	Cattlepass	10,645	1,500	*12,145

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
7VC39	Los Angeles	2	D, Mtbl	Goodrich Blvd. to Concourse Ave.		6/18/47	Econolite Corp.	Signals	$33,003	$3,000	*$36,003
7VC50	Los Angeles	2	D, Wit	Whittier Blvd. Painter Ave. Redman Ave.		11/26/47	Electric & Machinery Service, Inc.	Signals	33,821	2,550	*36,371
7VC16	Los Angeles	2	L.A.	Kearney to Soto Sts.		1/14/46	Peter Kiewit Sons' Co.	P.C.C. & A.C.	1,376,829	132,600	*1,509,429
14VC8	Los Angeles	2	L.A.	At Seventh St.		1/11/46	Byerts & Dunn	R.C. Overcrossing	247,667	23,096	270,763
14VC9	Los Angeles	2	L.A.	Santa Ana Pkwy. over Ramp 4 of Ramona Pkwy.		3/29/46	Contracting Engrs. Co.	Two Overhead Crossings	132,235	16,566	148,801
14VC10	Los Angeles	2	L.A.	At Benton Way		2/ 4/46	Byerts & Dunn	R.C. Overcrossing	147,552	21,901	169,453
14VC11	Los Angeles	2	L.A.	At Fourth St.		1/ 5/46	Byerts & Dunn	R.C. Overcrossing	130,354	14,573	144,927
14VC14	Los Angeles	2	L.A.	At Boyle Ave.		7/25/46	Peter Kiewit Sons' Co.	R.C. Overcrossing	202,616	13,460	216,076
14VC20	Los Angeles	2	L.A.	At Silver Lake Blvd.		11/14/46	Guy F. Atkinson Co.	R.C. Undercrossing	426,268	3,300	*429,568
14VC22	Los Angeles	2	L.A.	At Grand Ave.		12/ 9/46	Oberg Bros.	R.C. Crossing	239,009	19,991	259,000
14VC24	Los Angeles	2	L.A.	At Olympic Pkwy.		12/30/46	Haddock Co.	R.C. Undercrossing	300,347	20,000	*320,347
14VC23	Los Angeles	2	L.A.	At Lorena St.		12/11/46	W. J. Disteli	R.C. Box Girder Overcrossing	140,261	11,307	151,568
14VC25	Los Angeles	2	L.A.	At Esperanza St. & Indiana St.		12/31/46	Haddock Co.	Overcrossing & Undercrossing	239,673	1,800	*241,473
7VC28	Los Angeles	2	L.A.	Kearney to Soto Sts.		2/ 4/47	Jannoch Nurseries	Landscaping	56,118	8,000	*64,118
14VC30	Los Angeles	2	L.A.	At Euclid Ave. & Marietta St.		4/29/47	Spencer Webb Co.	2 R.C. Box Girder Undercross	254,177	20,000	*274,177
14VC28	Los Angeles	2	L.A.	Soto St. Underpass		3/ 6/47	Oberg Bros.	R.C. Underpass	181,109	12,500	*193,609
7VC37	Los Angeles	2	L.A.	Aliso—Kearney Sts.		5/13/47	Vido Kovacevich	Grade P.C.C. & A.C.	185,380	23,600	*208,980
7VC44	Los Angeles	2	L.A.	Aliso St. to Kearney St.		7/11/47	Jannoch Nurseries	Landscaping	9,625	1,500	*11,125
14VC53-F	Los Angeles	2	L.A.	Vendome St. & Coronado St.		4/26/48	Chas. MacClosky Co.	2 Undercrossings	320,169	30,800	*350,969
7VC82	Los Angeles	2	L.A.	Vineland Ave. to Barham Blvd.		6/29/48	Tri-Cities Elec. Serv.	Lighting	39,668	4,000	*43,668
14VC37-F	Los Angeles	2	L.A.	Hollywood Pkwy. at Alvarado St.		10/20/47	Guy F. Atkinson Co.	Undercrossing	339,108	25,800	*364,908
14VC44-F	Los Angeles	2	L.A.	Virgil Ave., Hoover St., & Rosemont Ave.		1/20/48	Spencer Webb Co.	2 Undercrossings & 1 Overcrossing	566,267	41,000	*607,267
7VC35-FP	Los Angeles	2	L.A.	Vineland Ave. to Barham Blvd.	1.8	5/28/47	Peter Kiewit Sons' Co.	Grade, Pave. & Structure	1,707,402	140,000	*1,847,402
7VC73	Los Angeles	2	L.A.	E. Edgeware Rd. to 0.5 Mi. Easterly	0.05	4/22/48	McClain Const. Co.	Grade & Pave	14,947	2,083	*17,030
O-7VC108	Los Angeles	2	L.A.	Boston St. Extension	0.1	4/14/49	Dragline Rental Co.	Grade & Surface	15,467	2,500	*17,967
O-14VC54-F	Los Angeles	2	L.A.	Bonnie Brae St. & Beaudry Ave.		5/14/48	J. E. Haddock, Ltd.	2 Grade Separation Structures	415,690	36,000	*451,690
7VC49-F	Los Angeles	2	LA, C	Calabasas to 1.5 Mi. Westerly	2.2	11/17/47	Spicer Co.	Grade & Surface	324,700	38,900	*363,600
7VC59-F	Los Angeles	2	LA, D	Soto St. to Eastman Ave.	2.0	2/13/48	Griffith Co.	Grade & Pave	1,058,337	109,000	*1,167,337
O-7VC91	Los Angeles	2	LA, D	Aliso St. to Eastman Ave.		9/27/48	Elec. & Mach. Serv. Inc.	Lighting	118,587	5,000	*123,587
7V142	Los Angeles	2	LA, D	Aliso St. to Eastman Ave.		3/ 1/49	Day Labor	Signs & Lights	6,950		*6,950
7VC47	Los Angeles	2, 168	D, C	Various Locations		10/24/47	Econolite Corp.	Traffic Sig. & Lighting	58,393	3,500	*61,893
7VC81	Los Angeles	4	F	Pico Canyon Rd. to Rte. 79	3.3	6/24/48	N. M. Ball, Sons	Grade & Pave	428,975	52,400	*481,375
O-7VC87	Los Angeles	4	F, A	Saugus Rd. & Ventura Rd.		8/11/48	California Elec. Works	Signals & Lighting	33,343	2,500	*35,843

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
0-7VC78	Los Angeles	4, 79	F,A,B,A	S. of Santa Clara River to Castaic Cr.	2.6	6/10/48	Griffith Co.	Grade & Pave	$486,107	$50,000	* $536,107
7VC31	Los Angeles	4	G	Palomas Cr.—Violin Saddle	2.6	3/10/47	Clyde W. Wood, Inc.	Grade & P.M.S.	799,849	85,500	*885,349
7VC57	Los Angeles	4	G, H	Violin Saddle to Whitaker Summit	4.4	2/ 6/48	Winston Bros. Co.	Grade & Surface	1,375,995	144,000	*1,519,995
7VC38	Los Angeles	4	H	9 Mi. N. of Castaic to Frenchman's Flat	3.8	5/29/47	Winston Bros. Co.	Grade & Surface	1,510,145	152,000	*1,662,145
7V45	Los Angeles	4	Brb	Magnolia Ave. to Providencia Ave.		7/10/46	Day Labor	Traffic Signal			13,675
7AVC2	Los Angeles	4	Brb	Bet. Burbank Blvd. & Orange Grove Ave.	0.5	10/30/45	Jesse S. Smith	Grading & A.C. Paving	89,179	13,950	103,129
0-7VVC1	Los Angeles	9	A, B	On Foothill Blvd.		7/23/48	C. D. Draucker, Inc.	Signals & Channelization	70,334	5,000	*75,334
7VV11	Los Angeles	9	A, B	On Foothill Blvd.		7/12/48	Day Labor	Signals & Channelization	6,057		6,057
14VC33	Los Angeles	9	G	Across San Gabriel River near Azusa		6/26/47	Bonadiman-McCain Inc.	Reconstruct Bridge	44,184	6,118	50,302
7VC34	Los Angeles	9	H	Bet. Citrus Ave. & Grand Ave.	1.0	4/29/47	Griffith Company	Surfacing	7,873	646	8,519
0-7VVC5	Los Angeles	9	J, Ada, Mnro	Various Locations on Foothill Blvd.		10/ 6/48	C. D. Draucker, Inc.	Signals & Lighting	36,405	2,500	*38,905
7VC53-P	Los Angeles	9	Mnro, G H, Gdr	5th Ave. to Glendora Ave.		1/17/48	Econolite Corp	Signals & Lighting	81,192	3,800	*84,992
7XC22	Los Angeles	19	B, Pom	Bet. Rte. 77 & Pomona	0.7	10/17/46	Matich Bros.	Grade & Widen with P.C.C.	72,373	9,414	81,787
0-7VC88	Los Angeles	19	Pom	White Ave. to Garey	0.5	8/11/48	Cox Bros. Const. Co.	Surfacing	39,146	5,000	*44,146
7VC26	Los Angeles	23	E, F	About 0.5 Mi. N. of Palmdale	0.8	12/30/46	A. A. Edmondson	Grade & Surface	60,829	280	61,109
0-7VC74	Los Angeles	23	G	Lancaster to Kern County Line	8.1	4/22/48	G. W. Ellis Const. Co.	Resurfacing	96,679	12,000	*108,679
0-7VC68	Los Angeles	23	I	Rte. 79 to ½ Mi. S. of Santa Clara River	4.0	4/ 1/48	Schroeder & Co.	Grade & P.M.S.	74,137	5,392	*79,529
0-7VC72	Los Angeles	26	A, EMte	New Ave. to Mountain View Ave.	3.9	4/15/48	Wm. Radkavich Co. Inc.	Grade & Surface	108,790	14,400	*123,190
7XC36	Los Angeles	26	A, B, EMte	San Gabriel Blvd.—Mt. View Rd.		6/ 6/47	C. D. Draucker Co.	Signals	55,781	5,600	*61,381
0-7VVC2	Los Angeles	26	B, WCov	Bet. Frazier St. & Barranca St.		7/29/48	Paul Gardner	Signals	76,613	5,000	*81,613
7XC38	Los Angeles	26, 77	C, B	At Holt Ave. & Bellevue Ave.	0.5	6/24/47	Griffith Company	Widen & Surface	74,341	7,400	*81,741
7XC37	Los Angeles	26, 77	C, B	At Holt Ave. & Bellevue Ave.		6/24/47	Econolite Corp.	Signals & Lighting	30,941	3,000	*33,941
7VMC23	Los Angeles	26	Alh	Ramona Blvd. & Garvey Ave.		3/22/48	Econolite Corp.	Signals	13,179	1,300	*14,479

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
7VC58	Los Angeles	26	L.A.	Macy St. to Indiana St.	1.8	2/13/48	Jannoch Nurseries	Landscaping	$42,185	$4,000	*$46,185
7XC16	Los Angeles	26	L.A.	Bet. Macy St. & Indiana St.	1.9	4/26/46	Alcorn Fence Co.	Fence	26,927	1,843	28,773
7XMC4	Los Angeles	26	Mon, P, A	Various Locations		12/11/46	C. D. Draucker Co.	Traffic Signal	42,189	686	42,875
7V102	Los Angeles	59	D	Sandy Creek		2/ 2/48	Day Labor	R.C. Box Culvert	5,941	139	*6,080
14VC45	Los Angeles	59	H	At Big Rock Wash		1/23/48	Troy Const. Inc.	2 R.C. Bridges	38,941	4,500	*43,441
7VC23	Los Angeles	60	A	Latigo Canyon to Malibu Cr.	4.5	10/14/46	Peter Kiewit Sons' Co.	Grade & Pave	1,655,747	150,500	*1,706,247
7VC63	Los Angeles	60, 158	C, B	Various Locations		3/ 5/48	Econolite Corp.	Signals	48,638	4,000	*52,638
7V41	Los Angeles	60	ESeg., Man B	In El Segundo at El Segundo Blvd. & in Manhattan Beach at Rosecrans Blvd.		5/20/46	Day Labor	Widen & Channelize	3,768	128	3,896
7AVC3	Los Angeles	60	LA, G LBch	Dominquez Channel—S. Gabriel Ave.	0.7	4/25/46	James I. Barnes Const. Co.	Grade, Pave, & Bridges	1,996,111	195,000	*2,191,111
O-7VMC28-P	Los Angeles	60	Man B	At Marine Ave.		7/17/48	Econolite Corp.	Signals	11,609		11,609
7VMC11	Los Angeles	60	Rdo B, Hm B	Redondo & Hermosa Beach		3/ 7/47	C. D. Draucker Co.	Signals	44,274	1,545	45,819
7VC80	Los Angeles	60	SMca	Colorado St. Tunnel to Lincoln Blvd.	0.6	6/18/48	J. E. Haddock, Ltd.	Base & Surfacing	79,897	8,300	*88,197
O-7VVC10	Los Angeles	60, 158	SMca, A	Palisades Beach Rd. at California Ave. & Sepulveda Blvd. at Constitution Ave.		5/ 6/49	Westates Elec. Const. Co.	Signals & Lighting	14,593	1,300	*15,893
7VC22	Los Angeles	60, 166	E Seg., Man B, A	At Intersections of Rte. 60 with El Segundo Blvd. & Rosecrans Ave. & at Intersection of Rte. 166 with Washington Blvd.		7/19/46	Econolite Corp.	Traffic Signal Systems	24,705	1,796	26,501
7VMC9	Los Angeles	60, 175	Man B, Hm B	At Center St. & Gould Lane		2/17/47	Econolite Corp.	Traffic Signals	25,913		25,913
7V134	Los Angeles	61	C, D	Angelus Crest Highway	8.3	7/ 1/48	Prison Labor	Grading	350,000	20,000	*370,000
47X1	Los Angeles	61	C, D	Chilao to W. Islip Saddle	3.1	6/21/41	Prison Labor	Grading	1,016,529	35,500	1,052,029

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
7XMC2	Los Angeles	77	Alh, SGb	Various Locations		11/12/46	C. D. Draucker Co.	Signal System	$57,226		$57,226
7VC65	Los Angeles	77	SGb, A EMte	San Gabriel Blvd. to Hoyt Ave.		3/17/48	Elec. & Mach. Serv. Inc.	Signals	33,847	$2,500	*36,347
O-7VC66	Los Angeles	79	B	Bet. Saugus & Rte. 4	2.3	4/ 1/48	Smith-Edmondson Co.	Grade & P.M.S.	28,856	5,000	*33,856
7V112	Los Angeles	158	B	Centinella Ave. at Slauson & Jefferson Blvd.		2/26/48	Day Labor	Signals & Channelization	5,784		5,784
7X62	Los Angeles	161, 168	A, C	Colorado St. At Rosemead Blvd.		7/30/46	Day Labor	Widen Pav't & Const. Div. Strip	6,189	509	6,698
7XC25	Los Angeles	161, 168, 9, 62	A, C, Azu	At Various Locations		11/26/46	Econolite Corporation	Signal System Illumination	36,335	1,776	38,111
7VC40	Los Angeles	161, 9	Ada Mnro, G	In the Cities of Arcadia & Monrovia		6/30/47	Elect. & Mach. Serv. Inc.	Signals	39,020	200	*39,220
7XC33	Los Angeles	162	A	Doheny Dr.—La Brea Ave.		5/ 9/47	C. D. Draucker Co.	Signals	67,742	6,375	*74,117
7X100	Los Angeles	164	A	Mi. 1.05 Ely from Sepulveda Blvd.		10/ 2/47	Day Labor	C.M.P. Culvert	6,080	167	*6,247
7VC60	Los Angeles	164	A, Haw	Redondo Beach to Century Blvd.		2/20/48	C. D. Draucker, Inc.	Signals	79,004	5,000	*84,004
O-7VVC4	Los Angeles	164	A, Haw	166th St. to 132nd St.		9/17/48	Econolite Corp.	Signals	28,172	2,700	*30,872
O-7VVC6	Los Angeles	164	Ing	On La Brea Ave.		1/ 4/49	Elec. & Mach. Serv. Inc.	Signals	19,135	2,100	*21,235
7VC46	Los Angeles	165, 167, 174	A, A SGt	Figueroa St. & Carson St., Atlantic Ave. & Rosecrans Ave. & Firestone Blvd. & Garfield Ave.		10/ 2/47	Econolite Corp.	Signals	35,811	2,325	*38,136
7XC21	Los Angeles	165	L.A.	Bet. College St. & Bernard St.	0.3	8/16/46	J. E. Haddock, Ltd.	Grading & Paving	286,824	23,721	310,545
7XC30	Los Angeles	165	L.A.	College St. to Bernard St.	0.3	3/27/47	Jannoch Nurseries	Landscaping	17,948	2,000	*19,948
14XC19	Los Angeles	165	L.A.	At Sunset Blvd.		1/28/47	Winston Bros. Co.	R.C. Crossing	487,640	34,000	*521,640
7XMC13	Los Angeles	165	L.A.	Bernard St. to Ave. 22		9/22/47	Huettig & Schromm	Landscaping	19,599		19,599
7XMC12	Los Angeles	165	L.A.	Bernard St. to Ave. 22	1.3	7/23/47	J. E. Haddock, Ltd.	Grade P.M.S. & P.C.C.	264,326	21,000	*285,326

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
7V137	Los Angeles	165	L.A.	7th St. to Wilshire Blvd.		11/17/48	Day Labor	Open Street Connection	$120,000		$120,000
14VC55F	Los Angeles	165	L.A.	Arroyo Seco Parkway to Alpine St.		5/14/48	G. W. Peterson	Overcrossing	106,350	$16,000	*122,350
14VC47F	Los Angeles	165	L.A.	Harbor Parkway at Temple St.		10/14/47	James I. Barnes Const. Co.	Undercrossing	353,132	28,500	*381,632
7X55	Los Angeles	166	A	At Washington Blvd.		4/13/46	Day Labor	Widen Pavement, Construct Curbs & Paint Stripes	5,471	28	5,499
7VC54	Los Angeles	167	A, Lyn	At Atlantic Ave.		1/21/48	C. D. Draucker Co.	Signals	12,608	750	*13,358
7VC62	Los Angeles	167	A	Jardine & Everington Sts.		2/20/48	Econolite Corp.	Signals	12,811	794	*13,605
7V144	Los Angeles	167	Lyn, SGt	Lynwood to South Gate	2.9	5/ 2/49	Day Labor	Subsealing	11,000		*11,000
7XMC8	Los Angeles	167	Lyn, SGt	In the Cities of Lynwood & South Gate		6/26/47	Econolite Corp.	Signals	30,721	1,069	*31,790
7XC28	Los Angeles	167	Var.	Various Locations		1/22/47	R. E. Ziebarth	Signal Systems	52,506	1,101	53,607
7XC35	Los Angeles	168	A	On Lakewood Blvd., Bet. Spring St. & Conant St.	0.7	5/20/47	Jesse S. Smith	Reconstruct & Surface Shldrs.	29,625	1,471	31,096
7VC20	L.A., Ora	168, 60	B, Sl, B	At Intersections of Rosemead & Washington Blvds., Coast Hwy. with Main St. & with Bay Blvd.		6/24/46	Econolite Corp.	Traffic Signals	22,587	1,338	23,925
7XC15	Los Angeles	168	C	Rosemead Blvd., Bet. Huntington Dr. & Colorado St.	1.1	3/28/46	Griffith Company	Grading & A.C. Paving	122,380	14,987	137,367
7XC32	Los Angeles	168	C	Rosemead Blvd. at Broadway		5/ 1/47	Prescott Elec. & Mfg. Co.	Signal System	8,938	529	9,467
7X66	Los Angeles	168	C	Colorado St. to Huntington Drive		2/ 6/48	Day Labor	Landscaping	5,800	279	*6,079
O-7VC90	Los Angeles	168	C	At Longden Ave. & Duarte Road		9/13/48	Econolite Corp.	Signals & Lighting	19,412	1,900	*21,312
O-7VC86	Los Angeles	168	C	Longden Ave. to Huntington Drive	1.2	8/ 5/48	Vido Kovacevich Co.	Surfacing	64,333	9,000	*73,333
O-7VVC7	Los Angeles	170	A	On Norwalk Blvd.		1/ 7/49	Tri-Cities Elec. Serv., Inc.	Signals & Lighting	18,192	1,500	*19,692
O-7VC70	Los Angeles	170	A	Norwalk Blvd. to Orangethorpe Ave.	1.9	4/ 1/48	Sully-Miller Contr. Co.	Plant Mixed Surfacing	32,032	5,000	*37,032
7X64	Los Angeles	170, 174	A, B	At Firestone Blvd. & San Antonio Dr.		8/ 9/46	Day Labor	Widen Pav't & Channelize	10,130	835	10,965
7XC20	Los Angeles	170	A	Bet. Sixth St. & 0.4 Mi. N. of Imperial Hwy.	1.0	7/26/46	Cox Bros. Const. Co.	Repair with P.M.S. & Widen Shldrs.	16,741	1,648	18,389
7XC23	Los Angeles	170	A	Bet. Sproul St. & Anaheim-Telegraph Rd.	1.5	10/ 9/46	Griffith Company	Surfacing	22,686	2,731	25,417
7V121	Los Angeles	170	Wit	Whittier Blvd. to Holbrook Ave.		4/16/48	Day Labor	Widen & Pave	8,000		8,000
7VC64	Los Angeles	173	A	Indiana St. to Anaheim-Telegraph Rd.		2/27/48	Elec. & Mach. Serv., Inc.	Signals	22,577	1,500	*24,077

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
7VC79	Los Angeles	173	L.A., SMca	Lincoln Blvd. to Bundy Drive		6/10/48	C. D. Draucker	Signals	$49,272	$4,000	*$53,272
7VC56P	Los Angeles	173	L.A., SMca	Lincoln Blvd. to Bundy Drive	2.3	2/ 2/48	J. E. Haddock, Ltd.	Grade & Surface	854,398	93,000	*947,398
I-7VC110	Los Angeles	174	B	Manchester Ave. to Calden Ave.	0.4	4/21/49	Griffith Co.	Surfacing	10,052	2,250	*12,302
7XC29	Los Angeles	174	B	Firestone Blvd., Bet. Hooper Ave. & Santa Fe Ave.		1/31/47	Prescott Elec. & Mfg. Co.	Traffic Signal Systems	30,406	1,137	31,543
7XC31	L.A., Ora	174	B, A	On Firestone Blvd., Bet. Pioneer Blvd. & Lincoln Ave.	5.9	4/ 4/47	Jesse S. Smith	Resurface with P.M.S.	86,691	5,950	92,641
O-7VC93	Los Angeles	174	SGt, B	Los Angeles Riv. to Paramount Blvd.	1.9	10/22/48	Cox Bros. Const. Co.	Resurfacing	108,583	12,800	*121,383
7X94	Los Angeles	178	A	Bet. Charlemagne Ave. & Bellflower Blvd.		6/23/47	Day Labor	Storm Drain	6,000		6,000
O-7VC100	Los Angeles	205	L.A., SPas	On Arroyo Seco Parkway	3.2	1/ 7/49	Alcorn Fence Co.	Chain Link Fence	23,809	2,500	*26,309
O-7VC105P	Los Angeles	205	Pas, SPas	At Fair Oaks Ave. & State St.		1/20/49	J. E. Haddock, Ltd.	Off-Ramp	25,163	3,500	*28,663
14ASC4	Los Angeles	Access	L.A.	At Nicholson Ave.		6/ 3/46	Oberg Bros.	Overhead Crossing	267,405	39,865	*307,270
7ASC14	Los Angeles	Access	L.A., LBch	Term. Is. Freeway Bet. Henry Ford Ave. & Willow St.	2.1	4/18/46	Macco Const. Co.	Grade & Pave with A.C.	1,115,306	3,000	*1,118,306
14ASC2	Los Angeles	Access	L.A.	Union Pacific R.R. Overhead		4/18/46	Macco Const. Co.	Overhead Str. Steel	585,129	34,885	*620,014
14ASC3	Los Angeles	Access	L.A.	Over tracks of U.P., S.P. & P.E. at Anaheim		4/18/46	E. W. Elliot Const. Co.	Struct. Steel Overhead Cross.	852,809	47,016	*899,825
14DC24	Los Angeles	FAS 830		Over Santa Clara River & S.P.R.R.		7/31/47	Bent Const. Co.	Steel Bridge	216,469	3,665	*220,134
14DC22	Los Angeles	FAS 838		Across Los Angeles River at Florence Ave.	0.26	8/29/47	H. B. Nicholson	Bridge & Approaches	380,266	1,600	*381,866
O-7VVC3	Los Angeles	Var		At Various Locations		8/ 5/48	Tri-Cities Elect. Serv.	Signals & Lighting	45,168	3,300	*48,468
7XC26	L.A., Ora	Various		Various Locations		12/ 2/46	Econolite Corp.	Signal Systems	44,446	4,095	*48,541
7VC52	L.A., Ora	Various		Various Locations		12/18/47	Tri-Cities Elec. Serv.	Signal & Lights	29,674	3,000	*32,674
	Los Angeles			Various Locations				Minor Contracts & D.L. Projects	131,408	196	131,604
6TC10F	Madera	4	A	San Joaquin River to Arcola School	7.1	1/15/48	Harms Bros.	Grade & Pave	971,443	95,000	*1,066,443

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
6T4	Madera	4	B, C	Bet. 7.8 Mi. N. of Madera & Merced Co. Line		4/19/46	Day Labor	Restoring Oiled Borders	$10,767	$212	$10,979
14DC16	Mad, Fre	FAS 811		See Fresno County							
6DC12	Madera	FAS 864		Lincoln Road to State Route 32	5.5	7/28/48	Ted F. Baun	Grade & Surface	77,032	12,000	*89,032
14DC11	Madera	FAS 962		Across Fine Gold Cr.	0.2	4/23/47	Dan Caputo	Steel Bridge & Approaches	74,573	9,000	*83,573
	Madera			Various Locations				Minor Contracts & D.L. Projects	8,144	350	8,494
4T34	Marin	1	A	At Ignacio Wye		6/ 5/46	Day Labor	Traffic Signals	8,265	488	*8,753
4T54	Marin	1	A	At Grant Ave., in Novato		1/22/47	Day Labor	Install Signals & Lights	7,290	376	*7,666
4TC21	Mrn, Son	1	A, C	See Sonoma County							
O-4TC51	Marin	1	A	1.6 Mi. N. of Novato to Ignacio	2.3	4/29/48	A. G. Raisch Co.	Resurfacing	67,931	10,750	*78,681
4TC60	Marin	1	C	At Greenbrae		6/23/48	Brown-Ely Co., Contrs.	Signals & Channelization	65,920	10,500	*76,420
O-4TTC3	Marin	1	C. Mad	Corte Madera Intersection	0.2	10/14/48	Baldwin, Staub Corp.	Signals & Lighting	25,817	5,708	*31,525
4TC33	Marin	1	C	Bet. San Rafael & Waldo	2.1	4/16/47	Lee J. Immel	Surfacing	70,779	5,000	*75,779
4TC27	Marin	1	D, C, A	Bet. Waldo & Ignacio	1.5	6/28/46	Brown-Ely Co.	Repair with A.C. & Const. Shldrs.	64,196	4,876	69,072
4T29	Marin	1	SRf, C	Bet. Sta. 97+90± & Sta. 42+50±		12/26/45	Day Labor	Guard Rail	5,034	8	5,042
14TC18	Marin	1, Fdr	SRf	At Linden Lane		2/13/47	Parish Bros. & Lew Jones Const. Co.	Grade Separations & Approaches	246,404	23,500	*269,904
14TC12	Marin	8	A	Across Novato Cr. about 9 Mi. N. of San Rafael		7/17/46	William B. Willett Co.	Repair Bridge	5,752	516	6,268
4DC9	Marin	FAS 879		Point Reyes Station to 9 Mi. W. of Novato	9.9	4/22/48	A. G. Raisch Co.	Grade & Surface	216,678	15,410	*232,088
	Marin			Various Locations				Minor Contracts & D.L. Projects	24,873	240	25,113
10T72	Mariposa	110	B	Westerly Boundary to Coulterville	8.5	7/ 1/48	Day Labor	Grade & Surface	25,000	2,500	*27,500

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
14DC26	Mariposa	FAS 966 963		17 Mi. W. of Mariposa to 12 Mi. E. of Mariposa		9/18/47	E. H. Peterson & Son	Constructing 6 Bridges	$88,600	$9,400	*$98,000
	Mariposa			Various Locations				Minor Contracts & Day Labor Projects	9,020		9,020
1TC15	Mendocino	1	B	Bet. Burke Hill & 1 Mi. N.	1.0	6/21/46	C. M. Syar	Repair with Imp. Base Matl. & P.M.S.	38,385	4,128	42,513
1TC19	Mendocino	1	B	Bet. Hopland & Crawford Ranch	6.6	4/ 8/47	Clements & Co.	Plant Mix. Surf. & Seal Coat	159,023	14,376	173,399
1TC16	Mendocino	1	E	Bet. N.W.P.R.R. Grade Crossing & N.W. P.R.R. Underpass	0.8	10/14/46	A. R. McEwen & C. M. Syar	Grade & Surface	145,670	24,479	170,149
1TC10	Mendocino	1	E	Bet. N.W.P.R.R. Underpass & 1.1 Mi. S. of Willits	2.0	6/ 9/45	A. R. McEwen	Repair with Imp. Base & P.M. Bit. Matl.	30,009	6,265	36,274
1TC14	Mendocino	1	E	Bet. Willits & 2.6 Mi. Northerly	2.6	5/10/46	C. M. Syar	Plant Mixed Surfacing	74,473	8,303	82,776
1T67	Mendocino	1	H	Station 385+20 to Station 398+70	0.3	3/ 3/49	Day Labor	Improve Curve	12,000	700	*12,700
O-1TC22	Mendocino	1	H, I	2.8 Mi. S. to 1.0 Mi. N. of Rattlesnake Summit	3.8	4/ 1/48	C. M. Syar	Grade & Pave	117,317	14,000	*131,317
1TL8	Mendocino	1	I	Rattlesnake Creek		9/18/47	Day Labor	Bridge Repairs	16,871		16,871
14TC35	Mendocino	1	J	At Rock Creek	0.6	1/26/48	H. W. Ruby	Bridge & Approaches	174,688	15,100	*189,788
1TC17F	Mendocino	1	K	Red Mountain Creek to Piercy	4.6	10/31/46	Oilfields Trucking Co. & Phoenix Const. Co.	Grade & Pave	775,468	88,260	*863,728
14TC27	Mendocino	1	K	At Red Mountain Cr. & McCoy Cr.		9/30/47	James H. McFarland	Repairing 2 Bridges	28,338	3,068	31,406
1T38	Mendocino	1	K	At Red Mountain Cr.		5/ 9/47	Day Labor	Bridge Repairs	11,904		*11,904
14TLC9	Mendocino	16	A	At Dooley Cr. 1 Mi. E. of Hopland		4/22/46	F. Fredenburg	R.C. Bridge & Approaches	41,367	4,547	45,914
1WLC5	Mendocino	48	A	At Red Bank Cr. & Lost Cr.	0.4	9/16/46	C. M. Syar	Grade & Imp. Base Matl.	31,336	5,410	36,746
1W24	Mendocino	48	B	At Anderson Cr. Br. No. 10-64		5/10/46	Day Labor	Repair Bridge	7,981	7	7,988
1WLC4	Mendocino	56	A	At Slick Rock Cr.	1.0	5/16/46	Piombo Bros. & Co.	Grade & Imp. Base Matl.	118,949	17,029	135,978
1WLC3	Mendocino	56	B	At Alder Cr. about 7 Mi. N. of Point Arena	1.2	9/24/45	Guerin Bros.	Grading, Surfacing & Bridge	198,762	30,140	228,902

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
1WC8	Mendocino	56	D	Bet. Navarro River & Mendocino	1.9	6/26/45	W. C. Railing	Repair with Imp. Base Matl. & Seal Coat	$29,789	$2,213	$32,002
14WLC38	Mendocino	56	E	Bet. Bromley Cr. & Fort Bragg	3.8	10/25/46	Guy F. Atkinson Co.	2 Bridges, Grade, & P.M.S.	943,506	73,000	*1,016,506
14WLC56F	Mendocino	56	E	Across Noyo River	-----	6/27/47	J. H. Pomeroy & Co., Inc.	Bridge Superstructure	449,211	45,000	*494,211
1WLC1	Mendocino	56	F	At Chadburn Cr., about 13.4 Mi. N. of Fort Bragg	0.2	7/ 6/45	John Burman & Sons	Grading, Culvert & Surfacing	19,313	3,476	22,789
1WLC2	Mendocino	56	F	At Blue Slide Gulch	0.2	8/28/45	John Burman & Sons	Grading, Surfacing & Bridge	70,324	11,516	81,840
1WLC7	Mendocino	56	F	At Kibbesillah Creek	0.5	6/27/47	Arthur B. Siri	Grade & Surface	70,051	10,300	*80,351
1TMC1	Mendocino	56	FBg	S.C.L. of Fort Bragg to Oak St.	0.2	6/ 8/48	Arthur B. Siri, Inc.	Grade & Surface	16,837	-----	16,837
1DC3	Mendocino	FAS 505	----------	On Longvale-Covelo Rd., Bet. 1.5 Mi. & 5.4 Mi. Easterly of Dos Rios	2.9	3/26/47	N. M. Ball Sons	Grading	179,634	18,524	198,158
14DC30	Mendocino	FAS 979	----------	At Morrison Cr. S. of Ukiah	-----	11/ 5/47	Kenneth Whited	Reinforced Concrete Bridge	13,544	534	14,078
1DC9	Mendocino	FAS 982	----------	5.8 Mi. to 7.4 Mi. East of Noyo	1.6	8/ 5/48	A. G. Raisch Co. & Staring & Galbraith	Grade & Pen. Treat	81,106	11,100	*92,206
14DC36	Mendocino	FAS 982	----------	Across Chamberlain Creek	-----	5/25/48	Evans Const. Co.	R. C. Bridge	27,178	872	*28,050
----------	Mendocino	-----	----------	Various Locations	-----	-----	----------	Minor Contracts & D.L. Projects	17,258	-----	17,258
10T25	Merced	4	A	0.4 Mi. S. of Merced	-----	4/24/46	Day Labor	Improve Intersection	6,344	483	6,827
O-10TC31	Mer, Sta	4	A, C, A, B	Madera County Line to Salida	-----	4/ 9/48	Louis Biasotti & Son	Barrier Posts	48,560	6,400	*54,960
10TC11	Merced	4	C	Black Rascal Canal to Buhach Sta.	3.8	4/ 9/46	Gunner Corp.	Grade, Pave & Bridge	412,646	64,200	*476,846
I-10TC44	Mer, Sta	4	D, A, Cer, B	Merced River to Delhi & Merced County Line to Hatch Crossing	10.9	4/ 1/49	M. J. Ruddy & Son	Surfacing	88,541	9,200	*97,741
10TC19	Mer, Sta	4, 110	D, C	Bet. 3 Mi. N. of Livingston & Stanislaus County Line & Bet. Modesto & Empire	8.9	5/16/47	M. J. Ruddy & Son	Plant Mixed Surfacing	63,182	6,500	*69,682
10TC13	Merced	4	Atw, C	Bet. Atwater & 2 Mi. N.	3.2	5/27/47	Gunner Corp.	Repair with P.M.S.	64,642	5,336	69,978
10TC28	Merced	4	Mer	On 16th St. in Merced	-----	2/20/48	R. Goold & Son	Signals	6,123	1,000	*7,123

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
10TC17	Merced	18	A	Bet. Planada & 5.3 Mi. E.	5.3	4/22/47	M. J. Ruddy & Son	Plant Mixed Surfacing	$84,524	$7,742	$92,266
14TC47	Merced	32	A, B	San Luis Creek	0.7	6/23/48	Granite Const. Co.	Bridge & Approaches	119,705	11,800	*131,505
10W33	Merced	32	B	At Sta. 344+08		4/25/46	Day Labor	Widen Culvert	927	21	948
10WC12	Merced	32	C	Bet. San Joaquin Riv. & Madera Co. Line	3.0	6/21/46	Frank B. Marks & Sons	Repair with Untr. Rk. Base & P.M.S.	84,316	5,515	89,831
14WLC34	Merced	122	A	Across Mud Slough & Garzas Cr.		6/25/46	Dan Caputo	Bridge & Culvert	48,486	7,166	55,652
O-10TC37	Merced	122	Gus, A	Gustine to San Joaquin River	2.7	8/25/48	Elmer J. Warner	Grade & Surfacing	124,375	20,400	*144,775
10DC4	Merced	FAS 914 957 1058		Three Locations	18.7	7/ 8/48	Frank B. Marks & Son	Base & Surfacing	206,395	17,500	*223,895
	Merced			Various Locations				Minor Contracts & D.L. Projects	6,195		6,195
14TC46	Modoc	28	A	North Fork of Ash Creek		6/11/48	Evans Const. Co.	Widen Bridge	7,954	1,250	*9,204
2TC21P	Modoc	28, 210	A, A	Lassen County Line to Canby	20.8	5/16/47	Harms Bros.	Base and Seal Coat	158,856	15,000	*173,856
2T44	Modoc	28	A, B	Adin to Alturas		4/28/47	Prison Labor	Widen Structure	52,035	3,947	*55,982
2WC2	Mod, Las	28, 73 210	Various	See Lassen County							
2W16	Modoc	73	A, B	Bet. Rte. 28 & Oregon State Line	16.2	3/13/46	Day Labor	Grade & Pave	510,000	25,635	*535,635
2T71	Modoc	73	A, B	Route 28 to State Line (Portions)	33.8	7/ 1/48	Prison Labor	Grade	250,000	17,500	*267,500
14WLC57	Modoc	73	C	Across S. Fork of Pit Riv. at Likely		6/26/47	T. A. Kvale	Reinforced Concrete Bridge	32,062	6,781	38,843
2T73	Modoc	210	B	At Station 2152+31.7		10/19/48	Day Labor	R. C. Culvert	9,000	1,125	*10,125
2DC5P	Mod, Sis	210 FAS 753	B, A	Route 72 to 4 Mi. W. of Hatfield and 2.4 Mi. N. of Stronghold to Oregon State Line	22.8	5/ 1/47	Fairey-Hammond, Inc. & R. A. Farish	Surface & Seal Coat	176,982	20,300	*197,282

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
2DC2	Modoc	FAS 513	B, C, D	Bet. Eagleville & 4 Mi. N. of Lake City	29.5	5/23/46	E. B. Bishop & D. Gerald Bing	Grading & Plant Mixed Surf.	$410,111	$43,197	*$453,308
	Modoc			Various Locations				Minor Contracts & D.L. Projects	16,520	159	16,679
9X7	Mono	13	A	Bet. Mi. 10.0 & Mi. 12.8	2.8	3/20/47	Day Labor	Widen & Resurface	5,353		5,353
9V14	Mono	23	A	At Rock Cr.		5/ 1/47	Day Labor	Culvert & Approaches	5,392		5,392
9V11	Mono	23	A, B	Bet. Mi. 1.00 "A" & Mi. 3.65 "B"	8.4	3/13/47	Day Labor	Bituminous Surfacing	12,442		12,442
9VC7	Mono	23	I	Bet. Point Ranch & Bridgeport	2.8	5/ 1/47	Geo. E. France	Repair & Plant Mixed Surfacing	40,379	5,091	45,470
9X8	Mono	40	B	Bet. Mi. 0.0 & Mi. 3.4	3.4	3/20/47	Day Labor	Widen & Resurface	12,684		12,684
9XC3	Mono	40	C	Bet. Rte. 23 & Sheep Corral	6.3	6/28/46	Geo. E. France	Road Mix Surfacing	21,496	2,888	24,384
O-9VC12	Mono	40	D	Sheep Corral to Adobe Creek	16.0	5/ 6/48	Oilfields Trucking Co. & Phoenix Const. Co.	Resurfacing	47,402	3,900	*51,302
O-9VC14	Mono	95	A	7 Mi. N. of Coleville to Nevada State Line	2.2	6/ 8/48	Westbrook & Pope	Grade & Surface	119,495	15,000	*134,495
9DC7	Mono	FAS 1092		State Route 23 to 10.5 Mi. Ely	10.8	6/ 8/48	Browne & Krull	Grade & Pen. Treat	43,110	7,100	*50,210
9DC2	Mono	FAS 1093		Near Bridgeport on Twin Lakes Rd.	3.9	6/30/47	Dix-Syl Const. Co., Inc.	Grade & Bituminous Surfacing	45,443	7,981	53,424
9DC3	Mono	FAS 1094		Near Coleville	3.4	8/29/47	Nevada Constructors Inc.	Grade, Pen. Treat, & Tim. Br.	53,294	7,878	61,172
	Mono			Various Locations				Minor Contracts & D.L. Projects	4,066		4,066
5TC5	Monterey	2	B	Bet. 2 Mi. S. of Salinas & Salinas	1.9	3/19/46	Granite Construction Co.	Grading & A.C. Paving	208,926	27,880	236,806
5WC4	Monterey	2, 118, 56	B, A, J	Bet. Chualar & 3 Mi. N.; Bet. Salinas & Castroville & Bet. Werner Hill & Watsonville Jct.	3.7	5/ 1/47	Granite Const. Co.	Plant Mixed Surfacing	23,071	995	24,016
O-5TC10	Monterey	2	G, F	San Ardo to King City	3.6	4/22/48	Granite Const. Co.	Base and Surfacing	202,626	20,500	*223,126

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
5TC4	Monterey	2	J	Bet. Santa Rita & 0.8 Mi. N. of Crazy Horse Summit	8.4	1/14/46	A. Teichert & Son, Inc.	Grading & Plant Mixed Surfacing	$745,257	$66,643	$811,900
5TC7	Mon, SBt	2	J, B	Bet. 0.8 Mi. N. of Crazy Horse Summit & Chittenden Rd.	6.7	10/16/46	A. Teichert & Son, Inc.	Grading & Surfacing	740,056	92,000	*832,056
O-14TC42	Monterey	56	B	Prewitt Creek		5/24/48	Chas. O. Bodenhamer	Repair Bridge	18,737	3,200	*21,937
O-14TC49-P	Monterey	56	F, G	15 to 26 Mi. S. of Monterey		6/23/48	C. O. Bodenhamer	6 R.C. Culverts	28,116	4,000	*32,116
5W14	Monterey	56	F	At Sta. 395+46		4/15/48	Day Labor	Replace Bridge	5,700		5,700
5WC3	Monterey	117, 56	A, I	Bet. Del Monte Jct. & Seaside Jct.	3.0	6/28/46	N. M. Ball Sons	Grading & Paving	471,166	56,480	527,646
5DC5	Monterey	FAS 595		E. of Pajaro on San Juan—Watsonville Rd.	1.6	8/ 4/48	Granite Const. Co.	Grade & Surface	118,565	14,500	*133,065
14DC25	Monterey	FAS 1084		On Sanborn Rd. at S.P. Tracks		9/18/47	Dan Caputo	Overhead Structure	176,090	3,000	*179,090
	Monterey			Various Locations				Minor Contracts & D.L. Projects	20,472	15	20,487
4W27	Napa	6	A	Bet. Mi. 2.7 & Mi. 3.6	0.9	4/22/46	Day Labor	Construct Base & Resurface	9,973		9,973
14TC15	Napa	7	A	At Farm Rd. Undercrossing 4 Mi. N. of Vallejo		8/ 9/46	Minton & Kubon	Reconstruct Undercrossing	11,952	942	12,894
1WLC6	Nap, Lak	49	A, A	Bet. 0.1 Mi. Northerly & 1.5 Mi. Northerly of Napa-Lake County Line	0.8	3/24/47	Piombo Const. Co.	Grade, Surface, & 2 Bridges	212,385	21,000	*233,385
4DC6	Napa	FAS 607		Silverado Trail, 4 Mi. NW. of Napa to Calistoga	4.7	5/ 1/47	Geo. E. Murray	Grade, Surface, & Bridge	96,169	3,000	*99,169
	Napa			Various Locations				Minor Contracts & D.L. Projects	4,735		4,735
3TC41-F	Nevada	17	B	½ Mi. N. of Rattlesnake Cr. to Grass Valley	3.8	10/22/47	Fredrickson Bros.	Base & Surfacing	349,745	42,300	*392,045
3T58	Nevada	25	NevC, A	Nevada City to 1.75 Mi. NW.	1.7	10/29/46	Day Labor	Grade	35,762	2,414	38,176
3TC38	Nevada	25	NevC, A	Bet. E. Broad St. in Nevada City & 2 Mi. Northwesterly	1.9	6/26/47	J. Henry Harris	Surfacing	52,681	5,559	58,240
3TC45	Nevada	37, 38	BC, A	Three Locations	3.7	12/12/47	H. Earl Parker, Inc.	Grade & Surface	179,475	18,400	*197,875
3WC9	Nev, Pla	38	A, B, C	See Placer County							

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
----------	Nevada	------	----------	Various Locations	-----	--------	----------	Minor Contracts & D.L. Projects	$4,639	--------	$4,639
7VC27	Orange	2	A	Bet. 1 Mi. N. of Doheny Park & San Juan Cr.	0.9	1/ 2/47	Cox Bros. Const. Co.	Grade & Pave	112,100	$12,300	*124,400
7VC42	Orange	2	A, B	Bet. 1 Mi. S. of Galivan & 1.4 Mi. N. of El Toro Rd.	3.4	6/30/47	Jesse S. Smith	Repair Shldrs	15,658	2,100	*17,758
7VC33	Orange	2	B	Near Irvine about 6 Mi. S. of Tustin	-----	3/26/47	Catalina Const. Co.	Two Culverts	58,557	7,000	*65,557
7VC45	Orange	2	B	Bet. El Toro & Irvine	2.2	8/22/47	O'Brien & Bell Const. Co.	U.T. Rock Base & P.M.S.	60,008	6,200	*66,208
7VC19	Orange	2	B, C	Bet. 1.4 Mi. N. of El Toro Rd. & S. City Limits of Tustin	8.3	6/20/46	John J. Swigart Co.	Repair with P.M.S. & Widen Shldrs.	96,730	7,634	104,364
7V133	Orange	2	F	Sta. 83+00 to Sta. 99+70	0.3	6/30/48	Day Labor	Drainage Improvement	16,879	511	*17,390
7VC55-P	Orange	2, 178	Ana	Los Angeles St. & Center St.	-----	1/21/48	Prescott Elec. & Mfg. Co.	Signals & Lighting	42,043	3,500	*45,343
11VC5	Ora, SD	2	SCle, D	See San Diego County							
7VC17	Orange	2	SCle	At Rte. 2 & Avenida Del Mar	-----	3/ 1/46	C. D. Draucker Co.	Install Signals	5,570	726	6,296
7VC48	Orange	2	SCle	Bet. San Diego Co. Line & Valencia St. in San Clemente	1.8	11/ 3/47	O'Brien & Bell Const. Co.	Grade & Surface	93,369	10,000	*103,369
11V16	Ora, SD	2	SCle, Ocn, C,D	See San Diego County							
7V138	Orange	19	Ful	Sta. 35+00 to Sta. 108+50	1.4	12/17/48	Day Labor	Road Mix Shoulders	11,000	--------	*11,000
7VC71	Orange	43, 179, 183	A, A, A	On Harbor Blvd.	-----	4/ 1/48	Tri-Cities Elec. Serv.	Signals & Lighting	29,553	2,500	*32,053
7VC76	Orange	60	A, NptB	1.3 Mi. S. of Los Patos Ave. to Rte. 43	5.5	6/ 4/48	Sully-Miller Contr. Co.	Resurfacing	234,421	25,000	*259,421
7V124	Orange	60	A, B, NptB	1.3 Mi. S. of Los Patos Ave. to Rte. 43	5.3	5/11/48	Day Labor	Subsealing	19,080	--------	19,080
7VC67	Orange	60	A	Bet. Los Patos Ave. & 1.3 Mi. Southerly	1.3	4/ 1/48	O'Brien & Bell Const. Co.	Grade & Plant Mixed Surfacing	64,432	9,500	*73,932
14VC17	Orange	60	B	Across North Arm of Newport Bay	-----	9/13/46	Case Construction Co.	Repair Bridge	35,880	3,746	39,626
14VC13	Orange	60	C	Bet. Dana Point & Doheny Park	0.4	5/29/46	C. B. Tuttle & Schmidt Bros. Contractors	Widen & Surface with P.M.S. & Widen 2 Bridges	206,469	21,000	*227,469
7VC43	Orange	60	LgnB	In Laguna Beach on Coast Blvd., Bet. Diamond St. & Myrtle St.	-----	6/30/47	Tri-Cities Elec. Service	Traffic Signals	22,847	3,800	*26,647
7VC29	Orange	60	LgnB, C	Bet. Laguna Beach & Dana Point	4.9	1/30/47	Cox Bros. Const. Co.	Grade & Surface	240,349	27,000	*267,349

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
0-7VC75-P	Orange	60	NptB	Rte. 43 to Irvine Ave.	0.6	5/13/48	Baker & Pollock	Surfacing	$44,022	$4,066	*$48,088
7VC51	Orange	60	NptB, B, A	Newport Beach & Vicinity		12/18/47	C. D. Draucker Co.	Signals & Lighting	75,497	5,000	*80,497
7VC18	Orange	60	SlB, A	Bet. Los Patos Ave. in Sunset Beach & Second St. in Seal Beach	2.3	4/30/46	Griffith Company	Widen Shldrs & Resurface	44,921	4,005	48,926
7VC20	Ora, LA	60, 168	SlB, B	See Los Angeles County							
7V135	Orange	171	A	13th St. to Hazard St.		9/ 3/48	Day Labor	Drainage Correction	14,200		*14,200
7X98	Orange	171	A	13th St. to 15th St.		9/11/47	Day Labor	Side Drain	6,505	347	*6,852
7X59	Orange	174, 171	A, B	At Intersection of Grand Ave. & Manchester Ave.		6/28/46	Day Labor	Widen Pav't & Channelize	9,864	1,132	10,996
7XC31	Ora, LA	174	A, B	See Los Angeles County							
7X85	Orange	175	B	Bet. Rte. 2 & Rte. 43	4.5	3/31/47	Day Labor	Repair Shldrs	5,825		5,825
14VLC4	Orange	176	A	Across Coyote Cr. W. of Brea		11/ 3/47	O. B. Pierson	Reinforced Concrete Bridge	26,094	6,000	*32,094
7XC17	Orange	183	A	Bet. Verano St. & W. City Limits of Santa Ana	1.8	6/ 7/46	John J. Swigart Co.	Resurface with P.M.S. & Widen Shldrs.	26,608	3,447	30,055
7V143	Orange	184	S.A, A	Delhi Rd. to Newport Rd.	1.7	3/29/49	Day Labor	Resurfacing	60,000	2,000	*62,000
7VC52	Ora, LA	Var		See Los Angeles County							
7XC26	Ora, LA	Var		See Los Angeles County							
7DC2	Orange	FAS 742		On Harbor Blvd., Bet. Wilson St. in Costa Mesa & Manchester Ave. S. of Anaheim	11.2	12/31/46	Griffith Company	Widen & Surface	239,563	24,000	*263,563
7DC4	Orange	FAS 749		Two Locations	3.8	7/29/48	Sully-Miller Constr. Co.	Grade & Surface	118,223	1,336	*119,559
	Orange			Various Locations				Minor Contracts & D.L. Projects	37,077		37,077
3T51	Placer	3	A	Bet. 1.9 Mi. N. of Roseville & 1.0 Mi. S. of Lincoln	5.1	8/22/46	Day Labor	Construct Borders	17,742	1,900	*19,642
3TC34	Placer	17, 37	B, Aub	At Nevada St. & East St. Undercrossing		4/ 1/47	L. H. Leonardi Elec. Const. Co.	Lighting System	10,087	1,000	*11,087

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
3TC33-F	Placer	17	C	Wise Canal to Rock Creek	1.9	3/11/47	Fredrickson & Watson Const. Co.	Grade, Surface, & Underpass	$241,158	$28,600	*$269,758
3TC32	Placer	17	Aub, C	Bet. Rte. 37 in Auburn & Wise Canal	1.7	9/16/46	Fredrickson & Watson Const. Co.	Grade & Surface	185,786	18,000	*203,786
3TC50	Placer	37	Aub, A	Nevada St. to ½ Mi. E. of Auburn	1.8	4/ 1/48	Fredrickson & Watson Const. Co.	Fence & Barrier Posts	12,572	1,300	*13,872
3TMC14	Placer	17	Rsv	Bet. Jefferson St. & E. City Limits of Roseville	0.9	4/22/48	J. R. Reeves	Plant Mixed Surfacing	8,253		8,253
3TC27	Placer	17, 37	B, Aub, A	Bet. 0.1 Mi. W. of Nevada St. & 1 Mi. E. of Auburn	2.6	6/24/46	Fredrickson & Watson Const. Co.	Grade & Surf. with P.C.C. & P.M.S.	631,309	52,000	*683,309
14TC6	Placer	37	Aub	Over Tracks of S.P.R.R. in Auburn		1/ 8/46	H. W. Ruby	Steel Beam Overcrossing	94,387	6,922	101,309
14TC4	Placer	37	Aub	East St. Undercrossing in Auburn		1/ 5/46	H. W. Ruby	Steel Beam Undercrossing	59,712	1,650	*61,362
14TC7	Placer	37	Aub	Walsh St. Undercrossing		1/ 3/46	Wm. E. Thomas Const. Co.	R.C. Undercrossing	30,584	4,436	35,020
3WC9	Pla, Nev.	38	BC, A	Bet. 4.7 Mi. W. of Tahoe City & Nevada County Line	8.5	6/28/46	Clements & Co.	Repair with P.M.S. & Seal Coat	133,935	12,132	146,067
14WLC41	Pla, ED	65	A, A	N. Fork American River	0.3	9/16/46	H. W. Ruby	Bridge & Approaches	249,973	24,300	*274,273
3DC5	Placer	FAS 768 769 770		Loomis to Auburn & FAS Rte. 768 to Newcastle	11.9	8/ 7/47	H. Earl Parker, Inc.	Grading	138,611	16,903	*155,514
	Placer			Various Locations				Minor Contracts & D.L. Projects	5,417		5,417
2TC29	Plu, Sha, Tri	21, 20	B,B,A	Near Keddie, Schilling, & Douglas City		6/24/48	Liston Ehorn	Truck Scales	25,328	4,100	*29,428
14TC14	Plumas	29	A	Across North Fork of Feather River at Chester		8/ 9/46	C. C. Gildersleeve	Sidewalks on Bridge	6,288	179	6,467
2TC20	Plu, Las	29	A, A	Bet. 0.3 Mi. W. & 0.8 Mi. E. of Plumas-Lassen County Line	1.1	4/21/47	Fredrickson & Watson Const. Co.	Grade & Surface	89,551	9,645	99,196
O-14TC40	Plumas	83	A	Across Sulphur Creek		4/19/48	Chittenden & Chittenden	Bridge & Approaches	51,374	9,500	*60,874

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
14DC1	Plumas	FAS 523		At Hamilton Branch		5/ 9/45	Kiss Crane Co.	Steel Girder Bridge	$69,635	$8,217	*$77,852
2DC4	Plumas	FAS 523		Bet. Rte. 83 near Almanor & Plu-Las. County Line, 2 Mi. W. of Westwood	9.9	8/ 7/46	Fredrickson & Watson Const. Co.	Grade & Surface	386,276	37,053	*423,329
	Plumas			Various Locations				Minor Contracts & D.L. Projects	4,518	5	4,523
8VC6	Riverside	19	A	Bet. Mira Loma & 2.5 Mi. W. of Riverside	5.9	12/14/45	Geo. Herz & Co.	Grading & Plant Mixed Surfacing	686,302	40,183	726,485
8VC11	Riverside	19	A	Bet. Mira Loma & 2.5 Mi. W. of Riverside	5.9	3/20/47	George Herz & Co.	Seal Coat	8,604	934	9,538
8VC10	Riv, SBd	19	A, B	See San Bernardino County							
8VC12	Riv, SBd	19, 43, 9	A, A, A	See San Bernardino County							
8VC23	Riverside	26	C	ECL of Banning to Rte. 187	10.5	5/27/48	Basich Bros. Const. Co. & Basich Bros.	Surfacing	176,937	19,000	*195,937
14VC43	Riverside	26, 64	C, Q	NW. of Indio & W. of Indio		12/31/47	E. S. & N. S. Johnson	Redeck 5 Bridges	35,202	4,902	40,104
O-11VC27	Riverside	26	E	Edom to 2.9 Mi. N. of Indio	7.4	4/ 1/48	R. P. Shea, Co.	Surfacing	78,430	8,500	*86,930
8VC9	Riverside	26	Ban, B	Bet. Midway & E. City Limits of Banning	3.1	6/25/46	Herz Paving Co.	Repair with P.M.S. & Grade Shldrs.	52,245	2,755	55,000
O-8VMC4-P	Riverside	26	Bau	Magnolia Ave. to Pennsylvania Ave.	0.6	9/ 8/48	Foster & McHarg	Curbs & Gutters	10,442	2,000	*12,442
O-14VC51	Riverside	43	B	At Temescal Wash	0.5	4/ 1/48	Dimmit & Taylor & K. B. Nicholaus	Bridge & Approaches	165,609	20,000	*185,609
11VC8	Riverside	64	C, D	Bet. 6 Mi. E. of Desert Center & Hopkins Well	10.4	4/30/47	Arthur A. Johnson	Road Mix Surfacing & Seal Coat	57,207	5,633	62,840
11XC15	Riverside	64 146	E ABCDE	Bet. 1.9 Mi. W. of Pallowalla & 3.9 Mi. W. of Blythe & Bet. 3.6 Mi. N. of Imp. Co. Line & 1.8 Mi. S. of S. Bd. Co. Line	12.3	4/11/47	MacArthur & Son	Repair with R.M.S.	50,319	3,021	53,340
O-11VC32-P	Riverside	64	E, Bly	4 Mi. W. of Blythe to Colorado River	8.3	6/24/48	Basich Bros. Const. Co. & Basich Bros.	Base & Surfacing	230,675	23,600	*254,275
11VC21-F	Riverside	64	E, Bly, F	4 Mi. W. of Blythe to Colorado River	1.8	1/20/48	Arthur A. Johnson	Grade, B.S.T. & Structure	206,894	28,500	*235,394

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
0-14VC78	Riverside	64	H	Sleepy Draw		2/ 3/49	John Strona	Bridge	$29,426	$4,500	*$33,926
14VC21	Riverside	64	H	Across Coachella Canal 5 Mi. E. of Indio		11/14/46	F. Fredenburg	R.C. Slab Bridge	37,483	3,429	40,912
14VC19	Riverside	64	H, B	Near Indio		9/13/46	E. G. Perham	Repair 5 Bridges	37,195	3,714	40,909
8VMC2	Riverside	64	Hem	State St. to East City Limits	0.8	6/ 8/48	R. A. Erwin	Surfacing	11,544		*11,544
1-8VC33	Riverside	64, 194	Hem	West City Limits to State St. & Rte. 64 to N.C.L.	1.5	4/ 1/49	Geo. Herz & Co.	Surfacing	18,152	3,200	*21,352
11V52	Riv, SD	77	F, G, A	See San Diego County							
11X30	Riv, S.D.	77	F, F, G	See San Diego County							
11XC13	Riverside	146	ABCDE	Bet. 1.3 Mi. N. of Imp. Co. Line & 0.5 Mi. S. of S. Bd. Co. Line	15.4	8/21/46	Arthur A. Johnson	Repair with Imp. Base Matl. & R.M.S.	54,272	5,629	59,901
11VC28	Riverside	187	B, F	SE. of Mecca to S. of Thermal	6.8	5/21/48	Hensler Const. Co.	Grade, BST, & Structures	409,443	42,000	*451,443
0-8VC22	Riverside	187	C	0.1 Mi. to 0.6 Mi. E. of Cathedral City	0.5	5/13/48	Westbrook & Pope	Grade & Surface	54,375	6,000	*60,375
8XC13	Riverside	187	C	Near Cathedral City		8/29/47	R. P. Shea Company	Construct Dips	6,491	1,369	7,860
8VC16	Riverside	187	D	White Water Point to ½ Mi. N. of Palm Springs	4.1	12/11/47	Peter Kiewit Sons' Co.	Grade, Surface, & Structure	357,156	60,000	*417,156
0-8VC26	Riverside	193	B	Bellgrave Ave. to Rte. 19	3.0	6/10/48	R. A. Erwin	Surfacing	55,228	6,500	*61,728
8X5	Riverside	194	A	Bet. Sage & Jct. of Rte. 78		5/20/46	Day Labor	Grading, Surfacing & Culverts	14,472		14,472
0-14VC70	Riverside	194	C	Potrero Creek		9/29/48	H. R. Breeden	Bridge & Approaches	15,090	4,000	*19,090
8DC5	Riv, SBd	FAS 695		On Archibald Ave., Bet. Cloverdale Ave. & Valley Blvd.	6.0	9/ 4/47	Peter Kiewit Sons' Co.	Grade, IB & P.M.S.	191,254	20,055	*211,309
8DC3	Riverside	FAS 699		On Jurupa Ave., Bet. Mira Loma & Sunnyslope	5.3	7/ 8/47	Peter Kiewit Sons' Co.	Grade & P.M.S.	111,887	11,230	*123,117
8DC1	Riverside	FAS 706		On "B" St. & Crestmore Rd.	2.9	3/12/47	E. L. Yeager	Grade & Surface	117,067	9,902	126,969
14DC29	Riverside	FAS 720		At Santa Gertrudis Cr.	0.4	10/ 9/47	Foster & McHarg	Reinforced Concrete Bridge	37,337	1,680	*39,017

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
11DC2	Riverside	FAS 1162		On Jackson St.	5.0	10/29/48	Foster & McHarg	Grade & B.S.T.	$101,229	$12,000	*$113,229
	Riverside			Various Locations				Minor Contracts & D. L. Projects	21,616	14	21,630
3TC21	Sacramento	3	B	Bet. North Sacramento Viaduct & 0.5 Mi. E. of Ben Ali	4.1	12/20/45	Guy F. Atkinson Co.	Grade, P.C.C. Paving & Structures	1,770,253	152,600	*1,922,853
O-3TC55	Sacramento	3	B	North Sacramento Freeway	3.7	12/ 3/48	Fred Kaus	Barrier Posts	8,630	1,700	*10,330
3T56	Sacramento	3	B	North Sacramento Freeway		8/ 5/46	Day Labor	Signs & Stripe	8,021		*8,021
3T88	Sacramento	3	B	North Sacramento Freeway	0.3	8/ 4/48	Day Labor	Curbs	5,315	1,050	*6,365
O-3TC56	Sacramento	3	B	North Sacramento Off-Ramp	0.2	12/ 4/48	McGillivray Const. Co.	Grade & Surface	11,783	2,150	*13,933
3TC43	Sacramento	3	B	No. Sacramento Viaduct to Howe Ave.		11/13/47	Luppen & Hawley, Inc.	Lighting	30,372	3,450	*33,822
3TC30	Sacramento	3	N Sac	Bet. Birch Ave. & El Camino Ave.		8/27/46	R. Flatland	Traffic Signals	21,788	2,531	24,319
3TC44P	Sacramento	4	B, Sac	Stockton Blvd. at 14th Ave.		12/17/47	A. Teichert & Son, Inc.	Widening & Signals	24,473	3,800	*28,273
3TC36	Sacramento	11	B, Fol	Bet. 12 Mi. E. of Sacramento & Riley St. in Folsom	5.4	5/12/47	Harms Bros.	Surfacing with P.M.S.	55,606	4,623	60,229
10WC13	Sacramento	11	C	Bet. Antioch Br. & Emmaton	3.4	6/11/46	Sheldon Oil Co.	Repair with Imp. Bor. & Bit. Surf. Treat.	39,557	3,979	43,536
14WLC53	Sacramento	11	C	At Three Mile Slough		6/20/47	Johnson Western Co.	Bridge Substructure	238,659	18,900	*257,559
10TC26	Sacramento	11	C	Three Mile Slough	1.2	1/26/48	Sheldon Oil Co.	Grade & Surface Approaches	66,328	9,100	*75,428
10W55	Sacramento	11	G	Bet. Rio Vista Br. & 2.0 Mi. Northerly	1.9	5/ 7/47	Day Labor	Resurfacing	10,864	595	*11,459
3TC39	Sacramento	11	Fol, A	Bet. Sutter St. in Folsom & 3.7 Mi. E.	4.2	7/11/47	Brighton Sand & Gravel Co.	Plant Mixed Surfacing	37,884	2,338	40,222
14WLC47	Sac, Sol	53	A, C	See Solano County							
10W56	Sacramento	53	D	Bet. Iselton & Georgiana Slough	1.7	5/ 7/47	Day Labor	Resurfacing	11,495	590	*12,085
O-3TMC15	Sacramento	Var	Sac	In Sacramento	6.9	9/27/48	A. Teichert & Son, Inc.	Surfacing	104,875	5,273	*110,148
O-3TC52	Sacramento	54	B	At Sloughhouse	1.6	5/11/48	Brighton Sand & Gravel Co. & Lew Jones Const. Co., Inc.	Grade, Surface & 3 Bridges	209,670	24,500	*234,170
14DC5	Sacramento	FAS 537		Across Arcade Cr. on Madison Ave.		3/ 5/47	Wm. E. Thomas Const. Co.	R.C. Slab Bridge	18,706	2,185	20,891

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
14DC4	Sacramento	FAS 900		Across Bear Slough		10/ 3/46	M. A. Jenkins	R.C. Slab Bridge	$67,604	$3,897	$71,501
3DC3	Sacramento	FAS 929		On Marconi Ave., Bet. Howe Ave. & Fair Oaks Blvd.	4.7	6/30/47	McGillivray Const. Co.	Grade & Plant Mixed Surfacing	110,636	10,800	*121,436
14DC6	Sacramento	FAS 933		Across Laguna Cr.		10/15/46	Bati Rocca	R.C. Slab Bridge	34,095	2,295	36,390
3DC1	Sacramento	FAS 937		On Howe Ave., Bet. Fair Oaks Blvd. & Arden Way	1.6	3/17/47	Westbrook & Pope	Grade, Widen, & Surface	50,170	5,852	56,022
3DC6	Sacramento	FAS 937		Arden Way to Route 3	1.9	8/13/47	George E. France	Grade, Base & Armor Coat	65,747	6,900	*72,647
	Sacramento			Various Locations				Minor Contracts & D.L. Projects	11,234	293	11,527
5TC6	San Benito	2	A	Bet. Prunedale Jct. & SCl Co. Line	1.6	6/11/46	Granite Const. Co.	Repair with Cement Treat. & P M.S.	57,435	3,111	60,546
5TC7	SBt, Mon	2	B, J	See Monterey County							
5TC9	San Benito	22	C	Bet. Rte. 2 & San Juan Bautista	2.2	6/26/47	A. Teichert & Son, Inc.	Repair with Imp. Bor. & Bit. Surf.	35,565	4,000	*39,565
5W10	San Benito	119	C	At Late Cr.		3/27/47	Day Labor	Replace Bridge	5,778		5,778
5DWC1	San Benito	119	E	Bet. 2.5 Mi. S. of Hollister & Hollister	2.6	4/ 4/47	A. Teichert & Son, Inc.	Grade & Plant Mixed Surfacing	136,987	16,015	153,002
	San Benito			Various Locations				Minor Contracts & D.L. Projects	10,632		10,632
14VC31	San Bernardino	9, 190	A, A	Across Day Canyon Flood Channel about 5 & 7 Mi. E. of Upland		5/16/47	George W. Peterson	Two Bridges	73,669	9,015	82,684
8VC12	SBd, Riv	9, 19 43	A, A, A	Bet. E. City Limits of Upland & 0.6 Mi. E. of Haven Ave., Bet. 2.4 Mi. & 0.3 Mi. W. of Riverside & Bet. Panorama Point & Squirrel Inn	10.7	5/ 5/47	Matich Bros.	Plant Mixed Surfacing & Seal Coat	111,027	6,537	117,564
O-8VC20	San Bernardino	9	D, Upl, A, C	Los Angeles County Line to San Bernardino	9.0	4/15/48	Matich Bros.	Surface and Seal Coat	147,972	16,000	*163,972
8VC19	San Bernardino	9, 192	Upl	Foothill Blvd. & Euclid Ave.		4/ 1/48	Tri-Cities Elec. Serv.	Signals & Channelization	18,861	3,000	*21,861

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
8VC14-FP	San Bernardino	19	A, Ont, B	Los Angeles County Line to 0.6 Mi. E. of Ontario	5.7	10/14/47	Morrison-Knudsen Co.	Grade & Surface	$946,193	$85,000	$ *1,031,193
8VC10	SBd, Riv	19	B, A	Bet. 0.5 Mi. E. of Ontario & Mira Loma	5.8	9/23/46	Peter Kiewit Sons' Co.	Grade & Surface	429,996	60,400	*490,396
8VC15	San Bernardino	19, 192	Ont	Euclid Ave. & Route 19		10/29/47	Paul R. Gardner	Signals	12,969	1,800	*14,769
14VC12	San Bernardino	26	A	Across Mission Storm Drain		3/ 1/46	Carl Broome	Widen Bridge	11,391	2,831	14,222
8VC24	San Bernardino	26	A	On Colton Ave.		6/ 4/48	Ets-Hokin & Galvan	Signals	19,029	2,500	*21,529
8XC12	San Bernardino	26	D	Bet. Etiwanda Ave. & Mulberry Ave.	0.9	6/ 4/47	George Herz & Co.	Grade, Pave, & Structures	417,364	41,500	*458,864
8VC21	San Bernardino	26	D	2.7 Mi. W. of Colton	0.1	4/22/48	R. A. Erwin	P.M.S. & P.C.C.	5,218	1,400	*6,618
8XC6	San Bernardino	26	D	Bet. Vineyard Ave. & Etiwanda Ave.	5.7	3/29/46	Matich Bros.	Grading, P.C.C. Paving & Bridges	497,645	41,483	539,128
8XC5	San Bernardino	26	D, Ria	Bet. Mulberry St. & Colton	9.8	12/28/45	Griffith Company	Grading, P.C.C. Paving & Overcrossing	1,452,014	69,764	1,521,778
8X12	San Bernardino	26	D, Ria	Kaiser Springs to Colton		3/27/47	Day Labor	Landscaping	14,990		*14,990
8V32	San Bernardino	26	E, A, Rld	E St. to State St.	7.2	2/28/49	Day Labor	Signs & Stripe	6,919		*6,919
8VC17F	San Bernardino	26	E, A, Rld	E St. to State St. in Redlands	7.2	2/20/48	Geo. Herz & Co.	Grade, Pave & Bridge	778,827	90,000	*868,827
O-8VMC3	San Bernardino	26	Ont	Benson Ave. to San Antonio Ave.	1.2	7/ 9/48	Matich Bros.	Surfacing	51,552		51,552
8XMC1	San Bernardino	26	Ont.	On "A" St.		6/19/47	Paul Gardner	Traffic Signals	24,049	645	*24,694
8VC7	San Bernardino	26	Rdl.	Bet. State St. & E. City Limits	2.8	12/21/45	Matich Bros.	Grading & P.C.C. Paving	317,522	22,126	339,648
8VC25	San Bernardino	31	B	Cajon Pass Hwy. near Blue Cut		6/10/48	Matich Bros.	Truck Scales	12,315	500	*12,815
8VC8	San Bernardino	31	D	Bet. Victorville & Ora Grande Underpass	4.7	6/11/46	Geo. Herz & Co.	Repair with P.M.S.	41,131	2,673	43,804
14VC56	San Bernardino	31	H, J, K, L	28 to 70 Mi. E. of Barstow		5/28/48	Thomas Const. Co.	Redeck 13 Bridges	76,602	17,000	*93,602
8V8	San Bernardino	31	J	Bet. Field & Summit		7/ 6/46	Day Labor	Experimental Blanket	6,951		6,951
O-14VC68	San Bernardino	31	N, P	W. of Mountain Pass to S. of Nevada State Line		9/18/48	Thomas Const. Co.	Redeck 6 Bridges	38,808	8,000	*46,808
O-8VC28	San Bernardino	31	Q, SBd	Grant Ave. to Highland Ave.	1.8	8/23/48	Geo. Herz & Co.	Surfacing	191,686	21,000	*212,686

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
O-8VC30	San Bernardino	31	SBd	Mt. Vernon Ave. at Rialto Ave.	-----	8/23/48	Ed Seymour	Signals & Lighting	$10,987	$1,450	*$12,437
8XC9	San Bernardino	43	A	Bet. 8.6 Mi. & 11.7 Mi. N. of San Bernardino	0.4	10/ 4/46	Geo Herz & Co.	Widen & Surface with P.M.S.	48,831	2,662	51,493
8XC8	San Bernardino	43	B, C	Bet. Squirrel Inn & Big Bear Dam	13.8	6/28/46	R. R. Hensler	Road Mixed Surfacing & Seal Coat	102,008	14,300	*116,308
8XC10	San Bernardino	43	L	Bet. 1 Mi. E. of Victorville & Victorville	1.4	3/ 6/47	Matich Bros.	Grade & Surface	101,036	8,247	109,283
14VC50	San Bernardino	58	L	Across Teviot Creek	-----	4/ 1/48	L. H. Mulherron	R.C. Bridge	16,880	3,385	*20,265
O-14VC69	San Bernardino	58	N	4.0 to 0.5 Mi. W. of Java	-----	9/29/48	Covina Const. Co.	Redeck 6 Bridges	62,270	8,000	*70,270
8VLC1	San Bernardino	58	P	Bet. 11 Mi. E. of Needles & Red Rock Bridge	2.9	3/13/47	Arthur A. Johnson	Grade & Surface	59,612	4,901	64,513
O-8VC29	San Bernardino	190	C	E. Base Line Ave. to Orange St.	1.6	9/24/48	Matich Bros. & E. L. Yeager	Grade, Surface & Structures	426,774	38,000	*464,774
14XLC7	San Bernardino	190	D	At Mill Cr.	-----	6/21/46	Bent Construction	Bridge & Approaches	97,666	11,107	108,773
1-8VC35	San Bernardino	192	Upl	On Euclid Ave.	1.1	4/ 7/49	Matich Bros.	Resurfacing	9,436	2,200	*11,636
8X10	San Bernardino	207	A	Highland Ave. to City Creek Bridge	-----	2/ 9/48	Day Labor	Erosion Control	5,000	-------	*5,000
8XC14-F	San Bernardino	207	A	City Creek Bridge to Plunge Creek	4.3	9/30/47	Westbrook & Pope	Grade, Surface, & Bridge	783,726	90,500	*874,226
8XC7	San Bernardino	207	A	Bet. Highland Ave. & City Cr. Bridge	3.2	5/16/46	Denni Investment Corp.	Grading, P.M.S., & Construct Br.	707,904	79,500	*787,404
8DC5	SBd, Riv	FAS 695	----------	See Riverside County							
8DC7	San Bernardino	FAS 698	----------	Valley Blvd. to Foothill Blvd.	2.6	8/ 9/48	Matich Bros.	Grade & Surface	141,142	20,000	*161,142
8DC4	San Bernardino	FAS 706	----------	Bet. Riverside Ave. & Colton	2.1	8/ 7/47	T. M. Page	Grade & Plant Mixed Surfacing	53,897	5,800	*59,697
8DC6	San Bernardino	FAS 711	----------	Waterman Ave. to 0.2 Mi. E. of City Cr.	4.5	3/26/48	E. L. Yeager	Grade, Surface & Bridge	229,884	25,000	*254,884
8DC2	San Bernardino	FAS 712	----------	On Waterman Ave., Bet. Riverside-Redlands Rd. & Mill St.	2.7	4/ 8/47	Griffith Company	Grade, Surface, & 2 Bridges	381,007	37,000	*418,007

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
----------	San Bernardino	------	----------	Various Locations	-----	--------	----------	Minor Contracts & D.L. Projects	$24,927	--------	$24,927
11VC12	San Diego	2	A	Bet. Ninth St. & Luneta Dr. in Del Mar	0.6	9/13/46	V. R. Dennis Const. Co.	Widen with A.C. & P.M.S. Shldrs.	21,332	$3,972	25,304
11VC16	San Diego	2, 12	A, B, ECj	In Del Mar, Solana Beach, Encinitas, Carlsbad, & El Cajon	-----	6/30/47	Tri-Cities Elect. Service	Traffic Signals & Lighting	54,570	3,872	58,442
11VC9	San Diego	2	B, C, D	Bet. Leucadia & San Mateo Cr.	6.2	5/29/46	N. M. Ball Sons	Repair with Imp. Base Matl. & P. M.S.	55,573	3,635	59,208
11VC11	San Diego	2	C	At Main Entrance to Camp Pendleton	-----	7/22/46	Tri-Cities Elec. Service	Traffic Signal System	5,490	112	5,602
14GVC1	San Diego	2	C	Over A.T.&S.F. Ry. 1 Mi. N. of Oceanside	-----	12/28/45	Fred D. Kyle	Steel Overcrossing	85,806	12,168	97,974
11VC5	SD, Ora	2	D, SCle	Bet. Las Flores Cr. & San Clemente	9.5	9/20/45	N. M. Ball Sons	Grade & P.C.C. & A.C. Paving	678,642	59,617	738,259
14VC6	San Diego	2	D	Across San Mateo Cr., about 18 Mi. N. of Oceanside	-----	8/24/45	Oberg Bros.	R.C. Girder Bridge	140,199	14,629	154,828
11X27	San Diego	2	F	At Border Airport Curve, 2.5 Mi. N. of San Ysidro	-----	5/ 3/46	Day Labor	Superelevate Curve	5,195	125	5,325
11X28	San Diego	2	F	Bet. 1.5 Mi. N. of San Ysidro & 2 Mi. S. of Otay	1.0	6/11/46	Day Labor	Experimental Surfacing	14,089	655	14,744
11XC11	San Diego	2, 199 12	F, A, B, ECj	Bet. San Ysidro & Chula Vista; Bet. Rte. 2 & Imperial Beach; & Bet. Grossmont & El Cajon	9.3	5/29/46	R. E. Hazard Contr. Co.	Repair with Imp. Base Matl. & P. M.S.	111,306	5,541	116,847
11XC20	San Diego	2	ChV	Bet. S. City Limits & N. City Limits of Chula Vista	2.3	7/31/47	R. E. Hazard Contr. Co.	Plant Mixed Surfacing	50,784	2,294	52,979
11V16	SD, Ora	2	Ocn C, D SCle	Oceanside to San Clemente	-----	3/25/46	Day Labor	Signs & Stripe	7,344	--------	7,344
11VC7	San Diego	2	Ocn, C	Bet. San Luis Rey River & 0.2 Mi. N. of Aliso Cr.	4.9	12/ 7/45	Basich Bros. Const. Co. & Basich Bros.	Grading & P.C.C. Paving & Resurfacing Portions with A.C.	600,096	64,861	664,957
11VC29-P	San Diego	2	Ocn	Hill St. & Vista Way	-----	6/10/48	Tri-Cities Elec. Serv.	Signals	8,881	1,200	*10,081
11VC23-P	San Diego	2	Ocn	Wisconsin Ave., 2nd St., 3rd St., & 6th St	-----	2/20/48	California Elec. Works	Signals	16,065	2,400	*18,465
14VMC1	San Diego	2	S.D.	At Switzer Canyon Overpass near 10th St.	-----	3/10/47	C. B. Tuttle Co.	Redeck Overpass	43,437	3,697	*47,134
11VMC11	San Diego	2	S.D.	On Pacific Hwy. at Balboa Ave.	0.12	3/ 5/48	R. E. Hazard Contr. Co.	Grade, Pave, & Channelization	21,612	--------	21,612
11VMC7	San Diego	2	S.D.	From Tecolote Cr. to Balboa Ave.	2.5	12/ 8/47	R. E. Hazard Contr. Co.	Grade, I.B., & P.M.S.	45,593	--------	45,593
11VMC13-P	San Diego	2	S.D.	Pacific Hwy. at Balboa Ave.	-----	4/ 6/48	California Elec. Works	Signals & Lighting	11,287	--------	11,287
11VMC10-P	San Diego	2	S.D.	5th Ave. at Harbor Dr.	-----	3/ 4/48	Tri-Cities Elec. Serv.	Signals	9,655	1,000	*10,655

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
11VC17	San Diego	12	A, L Msa, B, ECj	Bet. San Diego & El Cajon	2.9	7/31/47	Griffith Company	Plant Mixed Surfacing	$42,564	$2,102	$44,666
11V46	San Diego	12	D	Willows to Sweetwater River	6.3	4/22/48	Prison Labor	Grading	216,000	20,000	*236,000
11VMC12-P	San Diego	12, 200	S.D.	College Ave. & El Cajon Blvd.—30th St. & Market St.		3/23/48	Ets-Hokin & Galvan	Signals	18,557		18,557
O-11VMC18	San Diego	12, 2 200	S.D.	Three Locations	5.9	10/19/48	Griffith Co.	Resurfacing	210,090		*210,090
11VC22-P	San Diego	12 City St.	S.D.	On Washington St. & on El Cajon Blvd.		2/20/48	Tri-Cities Elec. Serv.	Signals & Lighting	42,963	1,200	*44,163
11GC3	San Diego	12 City St.	S.D.	On Washington St., Normal St., & El Cajon Blvd.	1.1	9/ 8/47	Griffith Company	Grade, P.C.C. & P.M.S.	209,776	18,040	227,816
O-11VC36	San Diego	77	A	N. of San Diego City Limits to Murphy Canyon Rd.	2.8	8/ 6/48	V. R. Dennis Const. Co.	Surfacing	38,384	4,000	*42,384
11VC35	San Diego	77	B, Esd, F	0.9 Mi. S. to 0.3 Mi. N. of Escondido	3.0	6/29/48	Griffith Co.	Grade, Surface, & Bridges	608,356	75,000	*683,356
11X30	San Diego	77	F, G	Escondido to Sta. 380		8/30/46	Day Labor	Grading	523,200	41,000	*564,200
11X30	SD, Riv	77	F, G, F	Bet. Escondido & 10 Mi. N. of San Diego Co. Line		8/30/46	Prison Labor	Grading	179,879	11,375	191,254
11XC21	San Diego	77	F, G	Bet. Escondido & 3.4 Mi. S. of Riverside Co. Line	19.6	8/22/47	Morrison-Knudsen Co., Inc.	Plant Mixed Surfacing	209,543	15,000	*224,543
11V52	SD, Riv	77	F, G, A	Escondido to Murietta	6.0	7/ 1/48	Prison Labor	Grading & Drainage	150,300	18,500	*168,800
411X4	San Diego	77	G	S. Moosa Cr. to San Luis Rey River	1.5	6/30/41	Prison Labor	Grading	1,061,201	79,173	1,140,374
O-11VC38	San Diego	77	G	Riverside County Line to 3.4 Mi. S.	3.4	9/29/48	Peter Kiewit Sons' Co.	Surfacing	67,190	7,000	*74,190
14XC12	San Diego	77	G	At San Luis Rey River & Keys Canyon Cr.		4/26/46	Spencer Webb	Two Steel Girder Bridges	169,111	18,594	187,705
411X4	San Diego	77	G	Bet. 1.5 Mi. S. of Moosa Cr. & San Luis Rey River		7/ 3/41	Prison Labor	Grading	950,387	65,113	1,015,500
14XC6	San Diego	77	S.D.	At Date St., Quince St., & Upas St.		12/ 5/45	M. H. Golden Const. Co.	R.C. Overcrossings	158,981	16,935	175,916
14XC7	San Diego	77	S.D.	Across San Diego River		12/13/45	Harry L. Foster	R.C. Bridge	178,002	15,377	193,379
14XC9	San Diego	77	S.D.	Over Balboa Pkwy. at Richmond St.		2/20/46	M. H. Golden Const. Co.	Overhead Crossing	60,178	9,974	70,152
14XC13	San Diego	77	S.D.	At Friar's Rd.		6/25/46	Fred D. Kyle	Steel Girder Overcrossing	56,117	7,772	63,889
14XC16	San Diego	77	S.D.	Over Balboa Pkwy. at Pascoe St.		8/ 8/46	Carroll & Foster	R.C. Overcrossing	74,606	8,784	83,390

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
14XC17	San Diego	77	S.D.	On Balboa Pkwy. at Sixth St.		8/ 8/46	M. H. Golden Const. Co.	R.C. Overcrossing	$111,633	$9,253	$120,886
11XC10	San Diego	77	SD, A	Bet. 0.4 Mi. S. of Mission Valley Rd., & 0.5 Mi. N. of San Diego City Limits	4.1	5/15/46	Basich Bros. Const. Co. & Basich Bros.	Grading & P.C.C. Surfacing	1,121,774	102,836	1,224,610
11X43	San Diego	77	SD, A	"A" St. to 0.5 Mi. N. of San Diego City Limits	7.0	8/28/47	Day Labor	Traffic Signs	8,471		8,471
11XC9	San Diego	77	S.D.	Bet. "A" St. & 0.4 Mi. S. of Mission Valley Rd.	2.9	1/11/46	Mittry Bros. Const. Co. & Basich Bros. Const. Co.	Grading & P.C.C. Paving	1,384,011	122,945	1,506,956
11XC16	San Diego	77	S.D.	Bet. "A" St. & 0.4 Mi. S. of Mission Valley Rd.	2.9	4/21/47	Jannock Nurseries	Landscaping	72,369	7,200	*79,569
14XC15	San Diego	77	S.D.	At University Ave.		6/25/46	M. H. Golden Const. Co.	R.C. Overcrossing	131,114	12,000	*143,114
14XC14	San Diego	77	S.D.	At Mission Valley Rd.		6/26/46	M. H. Golden Const. Co.	Two R.C. Overcrossings	248,800	17,633	266,433
11XC19	San Diego	77	S.D.	Bet. 11th Ave. & "A" St. in San Diego		8/ 1/47	Tri-Cities Elec. Service	Signals & Lighting	9,507	721	10,228
11XC14	San Diego	77	S.D.	Bet. 0.9 Mi. E. Santa Ysabel & 2.4 Mi. W. Julian	1.3	2/17/47	Clifford C. Bong & Co.	Grading & Surfacing	118,832	12,000	*130,832
14XLC6	San Diego	78	A	Across Samagatuma & Descanso Creeks		5/16/46	Oberg & Cook	2 Bridges	88,860	8,520	97,380
14XC10	San Diego	78	D, E	At Matagual Valley Cr., Canada Verde Cr. & Acorn Cr.		4/ 1/46	O'Rourke & Parker	R.C. Slab Bridges	40,214	4,699	44,913
14VC42	San Diego	78	D	Agua Caliente Cr. & Buena Vista Cr.	0.5	12/17/47	E. S. & N. S. Johnson	2 Bridges & Approaches	85,371	11,000	*96,371
11VC19	San Diego	78, 195	E, C	Bet. 3.1 Mi. & 3.5 Mi. N. of San Luis Rey River & Bet. Colby Ranch & Rincon Store	1.1	12/30/47	Arthur A. Johnson	Grade & Bit. Surface Treat.	41,177	4,500	*45,677
11V41	San Diego	195	B	Live Oak Creek		2/ 2/48	Day Labor	Grade Approaches	14,000	1,400	*15,400
0-14VC59	San Diego	195	B	Live Oak Creek		6/29/48	E. G. Perham	R.C. Bridge	18,569	4,300	*22,869
14XLC8	San Diego	197	B	Across Santa Ysabel Cr.		11/ 1/46	Spencer Webb	Bridge & Approaches	225,425	18,387	243,812
14VC48	San Diego	198	F	San Felipe Creek east of Julian	0.3	2/16/48	Walter H. Barber	Bridge & Approaches	89,936	11,800	*101,736
14VC41	San Diego	198	ECj	At Wright St. Cr. in El Cajon		12/11/47	Johnson-Western Co.	R.C. Culvert	16,039	2,128	18,167
11VC25	San Diego	199	A	At National Ave. & Palm Ave.		3/22/48	Ets-Hokin & Galvan	Signals	5,013	700	*5,713
0-11VMC19P	San Diego	199	Cord	On Orange Ave.	1.5	10/19/48	R. E. Hazard Cont. Co.	Resurfacing	62,075	6,250	*68,325
14XLC9	San Diego	200	B	At Dulzura Cr. about 5 Mi. S. of Jamul	0.3	4/10/47	Griffith Company	Bridge & Approaches	76,748	6,454	83,202

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
11V54	San Diego	200	C	Cottonwood Creek		12/17/48	Day Labor	Fill	$7,416	$26	*$7,442
14XLC5	San Diego	200	D	At Campo Cr. about 6 Mi. W. of Campo		12/21/45	Walter H. Barber	Steel Bridge & Approaches	81,318	9,227	90,545
11VC24P	San Diego	200	SD	Euclid Ave. & Federal Blvd.		3/11/48	California Elec. Works	Signals	9,950	1,000	*10,950
	San Diego			Various Locations				Minor Contracts & D.L. Projects	50,705	308	51,013
4T64	San Francisco	2	S.F.	Alemany Blvd. Bet. Mission St. & Sta. 36		5/12/47	State's Share of Cost	Grade & Pave	98,000		98,000
14TMC1	San Francisco	2	S.F.	Bridge Over Presidio of San Francisco		11/ 6/46	R. W. Reade & Co.	Clean & Paint Approach Bridge	41,615		41,615
15T3	SF-Ala	68, 5	SF-Oak	San Francisco-Oakland Bay Bridge		7/19/45	Insurance		130,410		130,410
15T5	SF-Ala	68, 5	SF-Oak	San Francisco-Oakland Bay Bridge		8/10/48	Day Labor	Maintenance and Operation	1,290,000		*1,290,000
14TC21	SJ, Sta	4	A, B	See Stanislaus County							
10TC15	SJ, Sta	4	A, B, Rip	See Stanislaus County							
10TC24	SJ, Sta	4	A, B, Rip	See Stanislaus County							
10TC14	San Joaquin	4	C	Bet. Calaveras River & Lodi	8.2	6/22/46	Fredrickson & Watson Const. Co.	Grade, P.C.C. Pavt. & 3 Bridges	807,567	65,500	*873,067
10TC23	San Joaquin	4	C	Bet. Calaveras River & Lodi		8/28/47	F. Kaus	Barrier Posts	25,170	4,353	29,523
O-10TMC6P	San Joaquin	4	C, Lod	Cherokee Lane at Lodi Ave., Pine St. & Victor Rd.		8/ 3/48	Ets-Hokin & Galvan	Signals	9,203	750	*9,953
10TL2	San Joaquin	4	E	At Little John Cr. & S. Br. of Little John Cr. Br. No. 29-17, 18		9/21/44	Day Labor	Bridge Repair	10,476	746	11,222
10TL4	San Joaquin	4	E	At French Camp Slough & Lone Tree Slough Overflow Brs. No. 29-19, 20		10/16/44	Day Labor	Repairs	10,400	749	11,149
10TL5	San Joaquin	4	E	At Lone Tree Slough Overflows, Br. No. 29-21, 22		11/24/44	Day Labor	Replace Abutments	10,782	743	11,525
10TC25F	San Joaquin	4, 5	E, Stkn, C	Two Locations	6.3	12/ 4/47	Lord & Bishop & M. J. B. Const. Co.	Grade, Pave & Structures	1,463,373	150,000	*1,613,373
10TC12	San Joaquin	5	A, Tra	Bet. Byron Rd. & Banta Rd.	5.5	5/ 6/46	M. J. Ruddy & Son	Rock Base & Plant Mixed Surfacing	137,462	11,347	148,809
10TC10	San Joaquin	5	B	Bet. Grant Line Rd. & Mossdale	3.8	1/22/46	M.J.B. Construction Co.	Grading & P.C.C. Paving	396,325	45,040	441,365
14TC10	San Joaquin	5	B	Across Paradise Cut & Paradise Cut Overflow		1/28/46	Stockton Const. Co.	Steel Bridge & R.C. Bridge	114,333	13,563	127,896
14TC17	San Joaquin	5	B	Across San Joaquin River at Mossdale		11/22/46	Lord & Bishop	Bridge Substructure	257,449	13,423	270,872

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
10TMC2	San Joaquin	5	Tra	On 11th St., Bet. N. "B" St. & Central Ave.		10/ 2/47	Charles I. Cunningham	Paving with Portland Cem. Con.	$2,313		$2,313
10TC30P	San Joaquin	5	Tra	Between East St. & Roosevelt Ave.		4/ 9/48	Parker Electric	Signals	13,499	$1,200	*14,699
O-14TC56	San Joaquin	75	A	Old & Middle Rivers		12/ 6/48	Lew Jones Const. Co.	Redeck 2 Bridges	64,785	10,500	*75,285
10WC15	San Joaquin	75	A	Bet. Middle River & Holt	4.4	4/22/47	M.J.B. Construction Co.	Plant Mixed Surfacing	97,071	4,091	101,162
10W43	San Joaquin	75	B	Bet. Beginning of Section & Hewitt Rd.	12.1	8/19/46	Day Labor	Patching & Seal Coat	21,525	1,277	22,802
14WLC48	San Joaquin	97	A	Across Calaveras River	0.4	3/13/47	Elmer J. Warner	Grade, Surface & Bridges	72,567	12,800	*85,367
14AN2	San Joaquin	Access		At S.P. & W.P.R.R. Crossing on JX & Lathrop Rds.		3/12/45	Day Labor	Install Flashing Light Signals	12,849		12,849
14DC13	San Joaquin	FAS 901		Across Mokelumne River		4/23/47	A. A. Edmondson & A. L. Miller	Steel R.C. Bridge	164,234	16,365	*180,599
10DC5	San Joaquin	FAS 901		Davis Road to Bender Road	0.8	8/30/48	Claude C. Wood Co.	Grade & Surface	50,522	4,000	*54,522
	San Joaquin			Various Locations				Minor Contracts & D.L. Projects	17,331	735	18,066
5V18	San Luis Obispo	2	D	Near Santa Margarita		4/ 5/48	Day Labor	Truck Scales	15,420		15,420
5VC14F	San Luis Obispo	2	D	San Luis Obispo to Cuesta Grade	2.7	6/20/47	Fredericksen & Kasler	Grade & Surface	736,207	74,000	*810,207
5VC15F	San Luis Obispo	2	E, SLO	Miles Station to Marsh St.	6.6	11/ 4/47	Fredericksen & Kasler	Grade & Surface	1,404,951	135,000	*1,539,951
O-5VC16	San Luis Obispo	2	F	Deleissigues Cr. & Russel Turn	2.3	4/ 1/48	Madonna Const. Co.	Grade & Surface	126,573	14,500	*141,073
5VC13	SLO, SB	2	F, C	See Santa Barbara County							
5V9	San Luis Obispo	2	F, E	Bet. Nipomo & Pismo Beach	4.0	4/13/46	Day Labor	Stabilize & Raise Shldrs.	5,674	62	5,736
5VC7	San Luis Obispo	2	F	Bet. Santa Maria River & 1.5 Mi. S. of Nipomo	2.1	6/11/46	Fairey-Hammond, Inc.	Plant Mixed Surfacing	102,962	5,885	108,847
5V43	San Luis Obispo	2	Ps Rs, A	North City Limits to 1,300' north		9/ 7/48	Day Labor	Improve 2 Curves	6,350	105	*6,455
5VC17	San Luis Obispo	2	SLO	At Marsh & Higuera St.		4/ 6/48	L. H. Leonardi Elec. Const. Co.	Signals	15,653	1,900	*17,553
14XLC10	San Luis Obispo	33	D	Across Santa Rosa Cr. 9 Mi. E. of Cambria		6/18/47	E. G. Perham	R.C. Bridge	16,675	2,898	19,573
O-14VC52	San Luis Obispo	33	E	Across Rocky Cr. East of Cambria		4/22/48	D. M. Pilburn	R.C. Bridge	15,482	2,900	*18,382

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
5X17	San Luis Obispo	56	A	Bet. Arroyo de la Cruz & San Carpojo Cr.	3.9	3/20/47	Day Labor	Resurfacing	$13,963	$319	$14,283
O-5VC23	San Luis Obispo	56	D	San Luisito Cr. & San Bernardo Cr.	0.2	8/16/48	O. R. Ochs & Son	2 Culverts & Approaches	37,869	6,500	*44,369
14XLC11	San Luis Obispo	56	E	Across Villa Cr.		6/24/47	E. G. Perham	R.C. Slab Bridge	27,541	3,707	31,248
5XL8	San Luis Obispo	57	B	At Gifford Cattlepass		4/ 9/46	Day Labor	R.C. Bridge	8,636	27	8,663
O-14VC58	San Luis Obispo	125	B	Salinas River		6/18/48	O. R. Ochs & Son	Redeck Bridge	15,106	3,200	*18,306
5DC3	San Luis Obispo	FAS 678		Route 56 to ½ Mi. W. of Los Osos Creek	3.1	3/11/48	Madonna Const. Co.	Grade & Imported Borrow	58,345	10,300	*68,645
5DC2	San Luis Obispo	FAS 683		On Oso Flaco-Nipomo Rd., Bet. S.P.R.R. & 3.2 Mi. Easterly	3.2	4/11/47	A. Madonna	Bit. Surface Treatment	63,407	6,071	69,478
5DC1	San Luis Obispo	FAS 1086		Bet. State Rte. 137 & Rinconada-Las Pilitas Rd.	6.0	3/28/47	Nathan A. Moore	Grade & Imp. Base Material	50,408	3,933	54,341
5DC4	San Luis Obispo	FAS 1086		Rte. 137 to Rinconada-Las Pilitas Rd.	6.1	6/ 7/48	Ned H. Mulleneaux	Bit. Surf. Tr. & Pen. Tr.	15,802	1,464	17,266
	San Luis Obispo			Various Locations				Minor Contracts & D.L. Projects	26,560		26,560
4T44	San Mateo	2	A	At Hillcrest Blvd.		10/22/46	Day Labor	Traffic Signals	6,339	500	6,839
4TMC6	San Mateo	2	A, Burl	On El Camino Real, Bet. Rosedale Ave. & Primrose Rd.		8/ 7/47	Severin Electric Co.	Traffic Signals	40,368	5,000	*45,368
4TC52	San Mateo	2	A	Junipero Serra Blvd. & Santa Ynez Ave.		4/29/48	Jensen & Pitts	Signals & Channelization	37,965	7,025	*44,990
O-4TMC12-P	San Mateo	2	Burl, SM	Peninsular Ave. to Hillsdale Blvd.		9/13/48	Geo. Pollock Co.	Signals	48,189		*48,189
4TC55	San Mateo	56	A	At Whitehouse Cr. & at Gazos Creek	0.2	5/13/48	Gordon L. Capps	Grade, Surface, & Bridges	44,810	10,700	*55,510
4WC30	SM, SCr	56	A, C	See Santa Cruz County							
O-4RTC1	SM, SCr	56	A, C	See Santa Cruz County							
4TC36	San Mateo	68	A	At Geneva Ave. & near Visitacion Ave.	0.6	5/16/47	Chas. L. Harney, Inc.	Signals & Channelization	78,987	8,964	87,951
4T32	San Mateo	68	B	At San Bruno Ave.		3/27/46	Day Labor	Traffic Signals	4,244		4,244
4T55	San Mateo	68	B	At Main Entrance to S.F. Municipal Airport		1/30/47	Day Labor	Traffic Signals	19,391	947	*20,338
4T35	San Mateo	68	B	At Millbrae Ave.		6/26/46	Day Labor	Signal System	4,714		4,714
4T36	San Mateo	68	C	At Holly St.		6/21/46	Day Labor	Traffic Signals	5,545		5,545

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
4T88	San Mateo	68	D	Willow Road		1/19/48	Day Labor	Signals & Channelization	$10,289	$667	*$10,956
14TC19	San Mateo	68	F, Burl	On Bayshore Freeway, Bet. South San Francisco & Burlingame		2/28/47	Carrico & Gautier	Substructures for 4 Overcrossings	409,155	21,000	*430,155
14TC24-F	San Mateo	68	F, Burl	South San Francisco to Burlingame		8/ 7/47	Carrico & Gautier	4 Overpass Superstructures	983,375	56,000	*1,039,375
4T38	San Mateo	68	Bmt	At Ralston Ave.		8/13/46	Day Labor	Traffic Signals	6,947	500	*7,447
4TC24	San Mateo	68	Burl, SM	Bet. Broadway in Burlingame to State St. in San Mateo	2.2	6/22/46	Guy F. Atkinson Co.	Grade & Pave with P.C.C. on C.R. B.	676,635	79,000	*755,635
4TC46	San Mateo	68	Burl, Sm	Broadway in Burlingame to Peninsular Ave. in San Mateo	2.0	2/13/48	Huettig & Schromm	Landscaping	8,517	2,348	10,865
4T30	San Mateo	68	SM	At Third Ave.		12/31/45	Day Labor	Revise Signal System	6,519		6,519
14TC9	San Mateo	68	SM	On Bayshore Freeway at Peninsular Ave.		1/22/46	Macco Const. Co.	Steel Overcrossing	258,917	22,410	281,327
O-4TMC11-P	San Mateo	68	SM	Peninsular Ave. to Poplar Ave.	0.4	8/24/48	L. C. Smith	Grade & Bit. Surf. Tr.	20,410	2,950	*23,360
4T74	San Mateo	68	SSF	San Francisco to Burlingame		9/10/47	Day Labor	Signals	23,300	1,150	*24,450
4TC42-F	San Mateo	68	SSF	N.C.L. of South San Francisco to S. of Colma Creek	2.1	8/21/47	Guy F. Atkinson Co.	Paving	1,038,157	120,000	*1,158,157
4TC53	San Mateo	68	SSF, F, Burl	Colma Cr. in S.S.F. to Broadway in Burlingame	4.9	5/ 5/48	Frank W. Smith	Armor Coat	17,491	3,311	20,802
4T94	San Mateo	68	SSF, F, Burl	South San Francisco Underpass to Broadway in Burlingame		2/24/48	Day Labor	Restore Grade	7,133		7,133
14TC23-F	San Mateo	68	SSF	At Main Line & Belt Line R.R. in S.S.F.		6/27/47	J. H. Pomeroy & Co., Inc.	2 Overpass Superstructures	639,817	40,000	*679,817
14TC20-F	San Mateo	68	SSF	In South San Francisco		4/11/47	Harry J. Oser & Peter Sorenson	5 Structures	436,542	41,400	*477,942
4TC26	San Mateo	68	SSF	Bet. S.P.R.R. & 0.5 Mi. Southerly	0.5	6/25/46	Piombo Bros. & Co.	Grade & Construct Sand Drains	201,558	24,697	226,255
4TC30	San Mateo	68	SSF F, Burl	Bet. Colma Cr. in South San Francisco & Broadway in Burlingame	5.1	10/ 9/46	Macco Corp. & Morrison-Knudsen Co., Inc.	Grading & Paving	2,931,746	189,000	*3,120,746
4WL6	San Mateo	105	A	At Pilarcitos Bridge, No. 35-15		2/21/47	Day Labor	Bridge Repairs	4,895	213	5,108
O-4TC65	San Mateo	105	A	3 Mi. E. to Half Moon Bay	2.7	7/28/48	L. C. Smith	Surfacing	87,812	12,708	*100,520
4DC7	San Mateo	FAS 1048		2.5 Mi. N. of Woodside to Ralston Ave.	4.7	6/30/47	Edward Keeble	Grade & Surface	248,414	20,000	*268,414

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
4DC2	San Mateo	FAS 1052		On Whipple Rd., Bet. Canada Rd., & Alameda de las Pulgas	2.9	8/ 8/46	Piombo Bros. & Co.	Grading	$158,435	$1,587	$160,022
O-4TTC5-P	SM, Ala	Var	Var	See Alameda County							
	San Mateo			Various Locations				Minor Contracts & D.L. Projects	19,804	550	20,354
5VC13	S.B., SLO	2	C, F	Bet. Zaca & Wigmore & Bet. 1.5 Mi. S. of Nipomo & Deleissigues Cr.	3.9	5/ 7/47	Brown & Doko	Plant Mixed Surfacing	117,444	11,000	*128,444
5V10	Santa Barbara	2	C,M,L	Bet. Zaca & Santa Maria (Portions)	9.8	4/13/46	Day Labor	Stabilize & Raise Shldrs	16,297	141	16,438
O-5VC18-F	Santa Barbara	2	D	Santa Ynez River to Jonata Park	3.6	4/ 9/48	Dimmit & Taylor & T. M. Page	Grade & Surfacing	544,331	93,000	*637,331
14VC36-FP	Santa Barbara	2	D	Nojoqui Creek & Santa Ynez River		10/8/47	C. B. Tuttle Co.	2 Bridges	516,039	27,000	*543,039
5V8	Santa Barbara	2	F	Bet. El Capitan Cr. & Alcatraz	0.6	4/ 6/46	Day Labor	Plant Mixed Surfacing	8,998	61	9,059
5VC9	Santa Barbara	2	G	Bet. ¼ Mi. E. of Las Varas Cr. & ¼ Mi. E. of El Capitan Cr.	2.9	10/28/46	N. M. Ball Sons	Grading & Surfacing	396,166	30,000	*426,166
5VC11	Santa Barbara	2	J	Bet. Sheffield Dr. & San Ysidro Rd.	1.3	4/ 1/47	N. M. Ball Sons	Grading & Surfacing	356,895	46,000	*402,895
O-5VC24	Santa Barbara	2	J	Sheffield Dr. to San Ysidro Rd.	1.1	9/15/48	Baker & Pollock	Grade, Surface, & 4 Bridges	136,816	19,500	*156,316
5VC10	Santa Barbara	2	P	At Hollister Wye, Bet. Santa Barbara & Goleta		12/ 2/46	L. H. Leonardi Elect. Const. Co.	Signal Systems	19,312	922	20,234
5VC8	Santa Barbara	2	P,Q	At Hollister Wye, Bet. Santa Barbara & Goleta		6/27/46	Jesse S. Smith	Grading & Plant Mixed Surfacing	142,320	23,396	165,716
5VC5	Santa Barbara	2	Q,G	Bet. Fairview Ave. & Tecolote Cr.	4.7	10/ 3/45	Dimmitt & Taylor	Grading & Plant Mixed Surfacing	503,927	60,855	564,782
5VC6	Santa Barbara	2	Q	Bet. 0.25 Mi. W. of Rte. 80 & Fairview Ave.	3.7	1/ 7/46	Dimmitt & Taylor	Grading, P.M.S. & 2 Bridges	524,215	49,992	574,207
5VC21	Santa Barbara	2	Q,G	Hollister Wye to Tecolote Creek	8.4	6/ 7/48	Baker & Pollock	Resurfacing	45,020	5,000	*50,020
14VC27	Santa Barbara	2	SB	At Salsipuedes Cr.		3/ 6/47	Macco Corporation	Overhead Substructure	227,207	24,510	*251,717
14VC34-F	Santa Barbara	2	SB	S.P.R.R. at Salsipuedes St.		8/21/47	Carl N. Swenson Co., Inc.	Overcrossing	520,482	34,000	*554,482
5VC12-F	Santa Barbara	2	SB	0.2 Mi. E. of Park Pl. to Rancheria St.	2.2	5/16/47	N. M. Ball Sons	Grade, Surface, & Bridge	885,281	90,000	*975,281
O-5VC20	Santa Barbara	56	A	Las Cruces to San Julian Creek	6.5	5/25/48	N. M. Ball Sons	Grade & Bit. Suf. Tr.	167,585	21,000	*188,585
5X16	Santa Barbara	149	D	Bet. Mi. 0.00 & Mi. 2.60	2.6	3/20/47	Day Labor	Resurfacing	9,838	239	10,077
5DXC1	Santa Barbara	149	D	Bet. 2.6 Mi. E. of Buellton & Grand Ave.	2.3	4/29/47	Frank T. Hickey, Inc.	Grading & P.M.S.	119,741	18,538	138,279

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
----------	Santa Barbara	-------	----------	Various Locations----------	-----	--------	----------	Minor Contracts & D.L. Projects	$25,416	$1,250	$26,666
4TC58-P	Santa Clara----	2	A, MVw	San Antonio Ave. to Saratoga Rd.-------	1.5	6/10/48	A. J. Raisch Paving Co.	Grade, Surface & Signals--------	244,883	25,000	*269,883
14TC2	Santa Clara----	2	E	At Ford Rd. about 6 Mi. S. of San Jose--	-----	12/ 4/45	Earl W. Heple----------	Steel Undercrosisng----------	59,621	10,837	70,458
14TC3	Santa Clara----	2	E	At Coyote Cr. & Coyote Rd., about 6 Mi. S. of San Jose----------	-----	12/ 4/45	Earl W. Heple----------	Steel Bridge & Undercrossing-----	265,690	20,594	286,284
4T97-Y	Santa Clara----	2	Gil	In Gilroy----------	-----	3/ 4/48	Day Labor----------	Signals----------	8,537	4,700	13,237
O-4TTC6-P	Santa Clara----	2	SCl	Bellomy St.----------	-----	1/ 7/49	L. H. Leonardi Elec. Const. Co.----------	Signals & Lighting----------	11,868	1,500	*13,368
4TC20	Santa Clara----	2	SJs,E	Bet. San Jose & 0.6 Mi. S. of Ford Rd.----	8.1	12/20/45	N. M. Ball Sons--------	Grade & P.C.C. Paving----------	1,280,109	110,000	*1,390,109
4T58	Santa Clara----	2	MgH	Through Morgan Hill----------	1.0	3/20/47	Day Labor----------	Resurfacing----------	8,964	323	9,287
4TC37	Santa Clara----	5	A	Bet. Alameda County Line & Milpitas---	1.0	5/16/47	A. S. Jones----------	A.C. Surface & Cr. Run Base-----	45,527	7,028	52,555
4T47	Santa Clara----	5	B	At Bascom Ave. & Race St.----------	-----	11/21/46	Day Labor----------	Traffic Signals----------	15,692	915	*16,607
4TC28	Santa Clara----	5	B,SJs	At Bascom Ave. & Park Ave----------	1.3	7/10/46	Union Paving Co.-------	Grade & Pave----------	181,888	36,214	218,102
4T57	Santa Clara----	5, 68	A, B	At Intersection of Oakland Rd. & Bayshore Hwy.----------	-----	3/ 4/47	Day Labor----------	Traffic Signals----------	8,555	517	9,072
4T113	Santa Clara----	32	A	Furlong Creek----------	-----	9/28/48	Day Labor----------	Detour----------	6,359	--------	*6,359
O-14TC54	Santa Clara----	32	A	Furlong Creek----------	-----	9/29/48	Dan Caputo----------	R.C. Bridge----------	6,709	1,500	*8,209
4WC28	Santa Clara----	32	C	About 1.25 Mi. W. of Merced Co. Line--	0.1	4/29/47	Granite Const. Co.------	Grade & Surface----------	11,532	1,818	13,350
4T62	Santa Clara----	68	B,SJs	At McKee Rd.----------	-----	4/17/47	Day Labor----------	Signals & Lights----------	7,365	439	*7,804
4T96	Santa Clara----	68	B	Agnew Road----------	-----	3/ 3/48	Day Labor----------	Signals & Lighting----------	9,331	646	*9,977
O-4TC62	Santa Clara----	68	B, SJs	Gish Road to Route 5----------	0.5	6/18/48	Chas. L. Harney, Inc.---	Resurfacing----------	70,100	9,800	*79,900
4TC32	Santa Clara----	68, 2	SJs	At Santa Clara St. Underpass in San Jose-	0.5	2/ 6/47	Huettig & Schromm-----	Landscaping----------	15,623	1,811	*17,434
14TC11	Santa Clara----	68, 2	SJs	On Bayshore Freeway at Santa Clara St.-	-----	4/ 1/46	Fredrickson & Watson Construction Co.------	Separation structure & Apprs.-----	402,703	49,770	452,473
4T37	Santa Clara----	68, 2	SJs	On Bayshore Freeway at Santa Clara St.-	-----	7/ 6/46	Day Labor----------	Maintain Detour----------	7,280	--------	7,280
4DC3	Santa Clara----	FAS 992	----------	On Leavesley & Ferguson Rds.----------	4.5	9/20/46	Granite Const. Co.------	Grading and A.C. Paving---------	162,073	20,138	182,211

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
4DC4	Santa Clara	FAS 1000		On Stevens Cr. Rd.	0.4	12/30/47	Dan Caputo & Edward Keeble	Grading & Paving	$59,595	$5,705	$65,300
4DC8	Santa Clara	FAS 1000		On San Jose-Stevens Cr. Rd.	3.5	8/29/47	A.J. Raisch Paving Co.	Grade, P.M.S. & Widen 2 Bridges	192,285	23,500	*215,785
4DC5	Santa Clara	FAS 1159		On N. Fourth St., Bet. Rte. 68 & San Jose	1.2	3/11/47	Piazza & Huntley	Grade & Pave	60,535	5,961	66,496
	Santa Clara			Various Locations				Minor Contracts & D.L. Projects	16,349		16,349
4WC30	SCr, SM	56	C, A	Waddell Creek to Finney Creek	1.4	6/13/47	Eaton & Smith	Grade & Surfacing	444,196	53,400	*497,596
O-4RTC1	SCr, SM	56	C, A	Waddell Creek to Finney Creek	1.3	1/21/49	Underground Const. Co.	Pipe Line	28,432	3,900	*32,332
14WLC42	Santa Cruz	56	C	At Waddell Cr.	0.3	9/16/46	Granite Const. Co.	Bridge & Approaches	84,426	8,237	92,663
4TC45-F	Santa Cruz	56	D, E, SCr	Rob Roy Junction to Morrissey Ave.	7.7	10/16/47	Earl W. Heple	Grade & Structures	1,448,177	160,000	*1,608,177
14DC40	Santa Cruz	FAS 1145		At Soquel Creek		7/28/48	Granite Const. Co.	Bridge & Approaches	80,281	2,000	*82,281
14DC20	Santa Cruz	FAS 1146		On Green Valley Rd.	0.5	6/27/47	Granite Const. Co.	Grade, P.M.S. & Bridge	62,641	5,988	68,629
	Santa Cruz			Various Locations				Minor Contracts & D.L. Projects	19,395		19,395
O-2TC25	Shasta	3	A	Cottonwood to Anderson	5.0	4/19/48	Fredrickson & Watson Const. Co.	Grade, Surface, & Bridge	637,237	62,691	*699,928
2T41	Shasta	3	C, D	Bet. O'Brien's Summit & Shasta Co. Line	1.3	4/17/47	Day Labor	Resurfacing	9,440	209	9,649
14TC28-P	Shasta	3, 20	Rdg, C	Route 3 in Redding to 1.5 Mi. East		10/7/47	Fredrickson Bros.	Grade, Surface, & Bridge	645,147	34,200	*679,347
2TC23-F	Shasta	20	A	Towerhouse to Schilling	5.3	12/17/47	Fredrickson Bros.	Grade & Surface	616,825	63,200	*680,025
2T43	Sha, Tri	20	A, B	See Trinity County							
2TC18	Shasta	20	B	Bet. Shasta & Schilling	4.6	8/29/46	Harms Bros. & N. M. Ball Sons	Grading & Plant Mixed Surfacing	521,565	49,500	*571,065
14WLC45	Shasta	20	C	Across Sacramento River at Redding		2/26/47	James I. Barnes Const. Co.	Bridge Substructure	285,713	16,918	302,631
2TC29	Sha, Plu, Tri	21, 20	B, B, A	See Plumas County							

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
2TLC2	Shasta	28	A	At Seaman's Gulch about 1 Mi. W. of Ingot	0.8	11/20/45	A. A. Tieslau & Son	Grading, Surfacing & Culvert	$123,801	$13,092	$136,893
2TC16	Shasta	28	B	Bet. 4.5 Mi. E. of Ingot & Montgomery Cr.	9.7	4/22/46	W. C. Railing	Surface with P.M.S.	71,959	4,392	76,251
O-2TC27	Sha, Sis	28, 72	C, A	Two Locations	9.0	5/12/48	W. C. Railing	Base & Surface	133,769	15,350	*149,119
2TC8	Sha, Las	28	E, AB	Bet. Fall River Mills & 8.3 Mi. E. of Bieber	30.2	5/ 8/45	M. J. Ruddy & Son	Repair with P.M. Bit. Matl., Cement Treated Base & Seal Coat	203,243	28,357	231,600
2DC3	Shasta	FAS 1072		Bet. Cottonwood & Anderson	10.8	6/ 8/46	Oilfields Trucking Co. & Phoenix Const. Co.	Grading & Surfacing	235,822	20,148	255,970
2DC8	Shasta	FAS 1076		Fall River Mills to Dana	5.5	4/29/48	W. C. Railing	Grade, Base, & Seal Coat	183,052	21,254	204,306
	Shasta			Various Locations				Minor Contracts & D.L. Projects	19,069	913	19,982
	Sierra			Various Locations				Minor Contracts & D.L. Projects	4,705		4,705
2TC17	Siskiyou	3	A	At North Entrance to Dunsmuir		4/23/46	M. W. Brown	Correct Drainage	9,274	1,829	11,103
2TC15	Siskiyou	3	B	Bet. Weed & Yreka	20.4	4/ 1/46	Clements & Co. & Milo A. Browne	Repair with Imp. Base Matl. & P. M.S.	183,259	16,424	199,683
O-2TC28	Siskiyou	3	B	Gazelle to 5.5 Mi. Nly.	5.5	6/18/48	Clements & Co.	Surfacing	141,947	14,400	*156,347
14TC22-F	Siskiyou	3	C	Between Camp Lowe & Bailey Hill		5/16/47	Ted F. Baun	Bridge & Underpass	321,507	31,000	*352,507
2TC22-F	Siskiyou	3	C	Camp Lowe to Bailey Hill	7.8	9/17/47	Fredrickson & Watson Cont. Co.	Grading	714,702	71,300	*786,002
2T45	Siskiyou	3	C	Bet. Bailey Hill & State Line	1.6	5/12/47	Day Labor	Plant Mixed Surfacing	29,996	1,026	31,022
2TC14	Siskiyou	3	Yre, C	Bet. Yreka & Camp Lowe	13.3	3/25/46	Clements & Co.	Repair with C.R.B., P.M.S. & Seal Coat	178,838	12,707	191,545
O-2TC27	Sis, Sha	72, 28	C, A	See Shasta County							
2WL19	Siskiyou	46	A	At Davis Mine Cut, Br. No. 2-60		4/28/44	Day Labor	R.C. Box Culvert	8,165	1,380	9,545
2WL20	Siskiyou	46	A	At Mine Spillway, Br. No. 2-61		4/28/44	Day Labor	R.C. Box Culvert	6,800	1,193	7,993
2WL21	Siskiyou	46	A	At Steep Cr., Br. No. 2-62		4/28/44	Day Labor	R.C. Box Culvert	12,237	1,184	13,421
2WL22	Siskiyou	46	A	At Curley Jack Cr., Br. No. 2-59		4/28/44	Day Labor	R.C. Box Culvert	9,923	1,938	11,861

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
2W10	Siskiyou	46	B	Bet. Happy Camp & Thompson Cr. (Portions)	11.8	4/27/45	Day Labor	Grading, Surfacing & Drainage	$59,990	$975	$60,965
2WC10	Siskiyou	46	B, C	Bet. Thompson Cr. & 4 Mi. E. of Seiad	11.9	7/15/47	W. C. Railing	Road Mixed Surfacing	59,260	7,500	*66,760
2W12	Siskiyou	46	D	Bet. Walker Bridge & Rte. 3	19.6	12/28/45	Day Labor	Widen Roadway & Restore Surfacing	79,922	4,295	84,217
2WC9	Siskiyou	82	D	Bet. Fort Jones & 2.2 Mi. E. of Moffett Cr.	7.5	6/ 5/47	Sheldon Oil Co.	Plant Mixed Surf. & Shldrs	49,770	4,507	54,277
2DC5-P	Sis, Mod	210 FAS 753	A, B	See Modoc County							
2DC1	Siskiyou	FAS 753-A		Bet. Rte. 72, 3 Mi. N. of Dorris, & 4 Mi. W. of Hatfield	15.6	5/29/46	Utah Construction Co.	Grade & Gravel & Cement Base	540,005	43,078	583,083
	Siskiyou			Various Locations				Minor Contracts & D.L. Projects	14,686	34	14,720
10T36	Solano	7	B	Bet. Rockville Rd. & County Hospital	4.0	10/29/46	Day Labor	Surface Shldrs.	17,764	887	18,651
10TC18	Solano	7, 90	C, Vac	Bet. Fairfield & 3.5 Mi. N. of Vacaville	4.8	5/13/47	Fredrickson Bros.	Plant Mixed Surfacing	35,607	3,000	*38,607
10TC9	Solano	7	D, I	Bet. Midway & 1.3 Mi. N. of Dixon	6.1	1/17/46	Fredrickson Bros.	Grading, P.C.C. Pav. & Bridges	1,078,243	55,355	1,133,598
10TC13	Sol, Yol	7	E, A	Across Putah Cr. about 6 Mi. N. of Dixon		7/29/46	M. A. Jenkins	Repair Bridge	9,469	1,896	11,365
COF-8	Sol, C.C.	7	F, A	See Contra Costa County							
10RTC4	Solano	7	I	Milk Farm	0.3	6/28/48	Harms Bros.	Grade & Surface	14,530	1,990	*16,520
10TC21	Solano	7	Frfd	Bet. Madison St. & Union Ave.		6/ 7/47	Ed. Pierce Elect. Co.	Traffic Signals	8,908	964	9,872
10TC8	Solano	7	Vac, D	Bet. Ulatis Cr. & Midway	6.0	12/ 5/45	Fredrickson Bros.	Grading, P.C.C. Pav. & Bridges	561,205	45,796	607,001
10W40	Solano	53	A, B	Bet. Suisun & Rio Vista		8/ 7/46	Day Labor	Repairing War Damage	60,162	2,899	63,061
14WLC47	Sol, Sac	53	C, A	Across Sacramento River at Rio Vista		4/21/47	C. M. Allen	Repair Bridge	9,296	1,084	10,380
10W42	Solano	74	C	Bet. Benicia Arsenal Grounds & Cordelia	8.7	8/19/46	Day Labor	Resurfacing	41,570	2,136	43,706
10WC14	Solano	90	A	Bet. Rte. 7 & 0.5 Mi. N. of Sweeney Cr.	5.7	9/16/46	Fredrickson Bros.	Grade P.C.C. Pave & 5 Bridges	541,388	42,100	*583,488
10W46	Solano	90	A	Bet. Allendale Jct. & Winters		10/18/46	Day Labor	Repair Shldrs.	4,989	270	5,259
10W39	Solano	90	A	Bet. Allendale & Putah Cr. (Portions)	4.7	7/24/46	Day Labor	Resurfacing	15,983	791	16,774

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
14WLC54	Solano	99	A	Across Miner Slough		6/ 5/47	C. M. Allen	Widen Bridge	$4,857	$155	$5,012
14TC26	Solano	99, 100	A, A	Cache Slough Ferry & Steamboat Slough Ferry		9/30/47	C. M. Allen	Three Ferry Ramps	6,704	1,375	*8,079
14WC5	Solano	208	A	Across Napa River at West City Limits of Vallejo		3/ 1/46	Healy Tibbitts Const. Co.	Repair Bridge Fender	14,251	1,755	16,006
O-14TC48	Solano	208	A	Napa River		6/23/48	H. F. Lauritzen	Repair Bridge	5,704	600	*6,304
14DC8	Solano	FAS 1106 1108 1110		Across Pleasants Cr., Alamo Cr., & Tributary to Putah Cr.		4/ 4/47	G. M. Carr & Batti Rocca	Five Bridges	82,713	4,329	87,042
14DC44	Solano	FAS 1108		Across Alamo Creek		10/ 6/48	Wm. E. Thomas Const. Co.	Structures	16,323	2,700	*19,023
10ANC12	Solano	Access	Val	On Waterfront Rd. Bet. Virginia St. & Santa Clara St.	0.3	2/ 4/46	C. M. Syar	Grading & A. C. Paving	31,421		31,421
	Solano			Various Locations				Minor Contracts & D.L. Projects	2,102	91	2,193
4TC63	Sonoma	1	A	Near Cloverdale		6/28/48	Stolte, Inc., & The Duncanson-Harrelson Co.	Truck Scales	24,917	3,000	*27,917
4T60	Sonoma	1	B	Healdsburg to Santa Rosa	1.7	3/31/47	Day Labor	Resurfacing	29,271	156	*29,427
O-4TC56	Sonoma	1	B, E, SRo	2 Mi. N. to 0.7 Mi. S. of Santa Rosa	4.3	5/20/48	Stolte, Inc., & The Duncanson-Harrelson Co.	Grade, Pave & Structures	1,362,993	110,000	*1,472,993
4TC34	Sonoma	1	C	Bet. 3 Mi. N. & 1 Mi. S. of Petaluma	4.0	4/23/47	A. G. Raisch Co.	Surfacing	86,367	11,400	*97,767
4TC21	Son, Mrn	1	C, A	Bet. 1 Mi. S. of Petaluma & Ignacio Wye	11.9	1/17/46	A. G. Raisch Co. & Harms Bros.	Grading, P.C.C. Pave & Struct.	1,643,359	162,000	*1,805,359
O-4TC69	Sonoma	1	E, SRo	Thru Santa Rosa		8/10/48	H. S. Tittle	Signals & Lighting	37,013	4,000	*41,013
4T46	Sonoma	1	SRo	College Ave. & 5th St.		11/ 1/46	Day Labor	Purchase Signals	8,038	597	8,635
4T112	Sonoma	56	C, D, E	Jenner to Gualala River	2.4	9/10/48	Day Labor	Grade & Surface	50,000	2,000	*52,000

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
4W30	Sonoma	56	E	At Various Locations		8/13/46	Day Labor	Improve Drainage	$6,323		$6,323
14TC33	Sonoma	208	A	Across Tolay Cr. about 14 Mi. W. of Vallejo		11/29/47	Evans Const. Co.	Redeck Bridge	8,612	$1,603	10,215
14DC2	Sonoma	FAS 786		Across Russian River at Hacienda		9/13/46	Kiss Crane Co.	Steel & Concrete Bridge	123,197	12,770	*135,967
	Sonoma			Various Locations				Minor Contracts & D.L. Projects	63,304	231	63,535
O-10TC31	Sta, Mer	4	A, B, A, C	See Merced County							
14TC21	Sta, S.J.	4	B, A	Across Stanislaus River		4/25/47	Fredrickson & Watson Const. Co.	Steel Bridge	354,632	26,000	*380,632
10GC6	Stanislaus	4	Tur	Between Olive St. and Marshall St.		5/12/48	Collins Elec. Co.	Signals	6,732	618	*7,350
10TC15	Sta, S.J.	4	B, A, Rip	Bet. Salida & 1 Mi. N. of Ripon	4.5	7/15/46	A. Teichert & Son, Inc.	Grading & Paving	434,113	52,161	486,274
10TC24	Sta, S.J.	4	B, A, Rip	Bet. Salida & 1 Mi. N. of Ripon		10/20/47	Evans Const. Co.	Barrier Posts & Guard Rail	9,901	1,500	*11,401
I-10TC44	Mer, Sta	4	D, A, Cer, B	See Merced County							
10TC22	Stanislaus	4	Cer	On Fourth St. in Ceres		6/10/47	L. H. Leonardi Elect. Const. Co.	Signals	13,999	2,275	*16,274
O-10TC32	Stanislaus	13	B	1.3 Mi. E. of Oakdale to 1.8 Mi. W. of Tuo. Co. Line	9.6	4/28/48	M. J. Ruddy & Son	Grade & Surface	202,165	24,200	*226,365
10TLC1	Stanislaus	13	B	At Wildcat Creek	0.4	6/27/47	Biasotti Const. Co.	Grade & Culvert	46,820	4,684	51,504
O-10TC29	Stanislaus	41	A, B	Newman to San Joaquin County Line	6.2	4/ 1/48	M. J. Ruddy & Son	Grade & Surface	140,606	13,500	*154,106
O-10TMC7	Stanislaus	66	Okdl	"D" St. to "B" St.	0.2	8/30/48	M. J. Ruddy & Son	Surfacing	13,519		*13,519
10TC19	Sta, Mer	110, 4	C, D	See Merced County							
14DC17	Stanislaus	FAS 912		Across Tuolumne River about 6 Mi. E. of Modesto		5/22/47	Erickson, Phillips, & Weisberg	R.C. Bridge	145,656	1,332	146,988
10DC3	Stanislaus	FAS 912		Empire to Hughson	0.9	4/22/48	Louis Biasotti & Co.	Grade & Surfacing	34,165	2,200	*36,365

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
----------	Stanislaus	-------	----------	Various Locations	-----	--------	----------	Minor Contracts & D.L. Projects	$13,347	--------	$13,347
O-3TC51P	Sut, But	3	A, LiO, A, Grd	Lomo to Fagan & in Gridley	7.1	4/ 1/48	McGillivray Const. Co.	Surfacing	91,513	$8,800	*100,313
3TC40	Sutter	3	LiO, A	At Live Oak	1.7	10/ 8/47	McGillivray Const. Co.	Grade & Surface	165,308	22,000	*187,308
3TC42	Sut, Yub	3	Y.C, Mvl	See Yuba County							
3TC47	Sut, Yub	3	Y.C, Mvl	See Yuba County							
3TC28	Sut, Yub	3	Y.C, Mvl	See Yuba County							
14TC5	Sut, Yub	3	Y.C, Mvl	See Yuba County							
14TC30	Sutter	87	B	Sutter Bypass N. of Knights Landing	-----	10/23/47	Wm. S. Shedd	Repair Bridge	19,521	3,100	*22,621
3W40	Sutter	87	B	Sutter Bypass to Tudor Road	2.0	9/30/47	Day Labor	Grade Shoulders	6,999	--------	6,999
3TC18	Sut, Yub	87, 3	B, A, B	See Yuba County							
----------	Sutter	-------	----------	Various Locations	-----	--------	----------	Minor Contracts & D.L. Projects	250	--------	250
2TC13	Tehama	3	C	Bet. 6 Mi. N. of Red Bluff & Shasta Co. Line	7.1	1/21/46	Oilfields Trucking Co. & Phoenix Const. Co.	Grading & Plant Mixed Surf.	538,746	66,000	*604,746
2TC19	Tehama	3	D	Bet. Mill Race Cr. & Red Bluff	2.8	4/ 2/47	Morrison - Knudsen Co., Inc.	Grading & Plant Mixed Surf.	140,290	16,759	157,049
14TC8	Tehama	3	D	Across East & West Sand Sloughs, Sampson Slough, Paynes Cr., Salt Cr. & Salt Cr. Overflow	-----	1/22/46	J. D. Proctor, Inc. & Dragline Rentals Co.	Const. 5 Bridges & Widen 2 Bridges	366,313	36,444	402,757
2TL15	Tehama	29	A	At Ramsey Cr., Br. No. 8-53	-----	4/ 2/46	Day Labor	Repair Bridge	6,542	270	6,812
2TL16	Tehama	29	A	At Flopper Cr., Br. No. 8-54	-----	6/ 3/46	Day Labor	Repair Bridge	9,832	269	10,101
2TL17	Tehama	29	A	At Dehaven Gulch, Br. No. 8-55	-----	9/10/47	Day Labor	Repair & Reconstruct Deck	11,392	220	11,612
2WL27	Tehama	29	D, E	At Dry Creek & Salt Creek	-----	4/24/47	Day Labor	Repair Bridges	11,700	--------	11,700
14WLC58	Tehama	29	E	Across S. Fork Cottonwood Cr.	-----	8/28/47	C. M. Allen	Repair Bridge	12,682	859	13,541
14DC27	Tehama	FAS 1078 1082	----------	Thomes Creek & Reed Creek	-----	10/ 3/47	G. M. Carr & Bati Rocca	2 Bridges & Approaches	180,612	15,300	*195,912

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
----------	Tehama	-------	----------	Various Locations	-----	--------	----------	Minor Contracts & D.L. Projects	$10,500	--------	$10,500
2DC6	Trinity	20, FAS 1089	A	Route 20 to Browns Mtn. & at E. Weaver Creek	6.5	6/30/47	N. M. Ball Sons	Culvert & Surface	269,686	$34,700	*304,386
1T66	Trinity	20	C	Sta. 0+00 to Sta. 355+00	-----	10/11/48	Day Labor	Oiling	10,000	--------	10,000
1T65	Trinity	20	C, D	Willow Creek to Whites Bar (Portions)	15.2	7/ 1/48	Day Labor	Grade & Surface	256,000	21,500	*277,500
1W22	Trinity	20	C, D	Bet. New River Bluffs & Cedar Flat	-----	10/ 9/45	Day Labor	Bituminous Surfacing	11,485	307	11,792
41W10	Tri, Hum	20	CD, D	See Humboldt County							
2T43	Tri, Sha	20	B, A	Bet. 1.4 Mi. E. of Buckhorn Maint. Sta. & 4.74 Mi. E. of Trinity Co. Line	6.45	4/17/47	Day Labor	Resurfacing	30,356	1,469	31,825
2TC29	Tri, Plu, Sha	20, 21	A, B, B	See Plumas County							
14WLC31	Trinity	29	A	Across Hayfork Cr. about 58 Mi. W. of Red Bluff	-----	5/17/46	C. C. Gildersleeve	Bridge	9,582	1,028	10,610
14WLC55	Trinity	35	C	At Redding Cr.	-----	6/12/47	C. C. Gildersleeve	Widening Bridge	19,020	1,204	20,224
----------	Trinity	-------	----------	Various Locations	-----	--------	----------	Minor Contracts & D.L. Projects	7,148	--------	7,148
14VC29	Tulare	4	A	At White River Sink	-----	3/ 5/47	Wheeler Const. Co.	Bridge & Approaches	31,317	8,000	*39,317
6XC13	Tul, Ker	4, 33	A, D	Bet. Delano & 2.5 Mi. S. of Earlimart & 2.1 Mi. E. of Wasco & Famoso	8.3	4/10/47	Griffith Company	Plant Mixed Surfacing	84,588	6,529	91,117
6VC3	Tulare	4	B, E, F	Bet. Quail Sta. & 6.5 Mi. N. of Goshen	13.5	4/13/45	Brown, Doko & Baun	Plant Mixed Bit. Material	110,714	12,176	122,890
6V14	Tulare	4	B, E, F	Bet. Rte. 127 & 9.5 Mi. N. of Goshen	-----	3/19/46	Day Labor	Restore Oiled Borders	15,681	229	15,910
O-6VC27	Tulare	4	B	1 Mi. S. of Tipton to Tulare Airport	7.9	8/ 3/48	N. M. Ball Sons	Grade & Structures	598,844	63,000	*661,844
6TC11P	Tul, Fre	4	E, D, Kngb, A	Mendocino Ave. to ¼ Mi. North of Kingsburg	-----	2/27/48	Tri-Cities Elec. Serv.	Signals & Lighting	24,773	2,400	*27,173
6TC8P	Tul, Fre	4	E, D, Kngb, A	See Fresno County							
6VC9	Tulare	4	E	Bet. 3.6 & 0.4 Mi. S. of Kingsburg	3.0	6/ 7/46	Valley Paving & Const. Co., Inc.	Repair with P.M.S. & Seal Coat	33,725	4,785	38,510

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
6XC10	Tul, Ker	129	A, AB	See Kern County							
O-6VC23	Tul, Ker	129	A, AB	See Kern County							
6X22	Tulare	129	D	Bet. Cairn's Corners & 4.4 Mi. Northerly	4.4	3/20/47	Day Labor	Resurfacing	$28,074	$189	$28,263
14XC20	Tulare	129	E	At Yokohl Cr.		3/24/47	R. M. Price Co.	Bridge & Approaches	89,167	14,750	*103,917
I-6VC31	Tulare	132	A	Route 134 to Packwood Creek	5.8	4/ 1/49	Valley Paving & Const. Co., Inc.	Surfacing	52,495	8,000	*60,495
6XC12	Tulare	132	A, Vis	Bet. Packwood Cr. & Rte. 10	2.3	3/24/47	R. M. Price Co.	Grade & Plant Mixed Surf.	219,181	18,000	*237,181
6DC11	Tulare	FAS 1126		FAS Route 1129 to State Route 134	8.0	6/29/48	Geo. E. France, Inc.	Grade & Bit. Surf. Tr.	144,898	10,500	*155,398
14DC32	Tulare	FAS 1126 1137		Bet. 3 & 15 Mi. So. of Visalia (Portions)		12/ 9/47	Trewhitt, Shields & Fisher	4 R.C. Bridges	47,514	6,100	*53,614
6DC8	Tulare	FAS 1128		Bet. 4 Mi. & 6.5 Mi. W. of Porterville		11/29/47	F. Gunner Gramatky	I.B. & Plant Mixed Surfacing	51,497	4,000	*55,497
14DC23	Tulare	FAS 1128		Across Tule River		7/23/47	Trewhitt, Shields & Fisher	R.C. Bridge	127,206	4,221	131,427
14DC14	Tulare	FAS 1130		Across White River about 7 Mi. SE. of Earlimart		5/16/47	E. H. Peterson & Son	R.C. Slab Bridge	15,136	374	15,510
6DC6	Tulare	FAS 1129 1130		Bet. 2 Mi. W. of Woodville & Poplar	8.0	7/23/47	F. Gunner Gramatky	Widen & Plant Mixed Surf.	183,226	10,000	*193,226
14DC15	Tulare	FAS 1136 1138		Across St. Johns River		5/12/47	Northup Const. Co.	R.C. Bridges	133,697	3,737	137,434
14DC28	Tulare	FAS 1140		At St. Johns River		10/10/47	Charles MacClosky Co.	Reconstruct Existing Bridge	65,467	8,000	*73,467
14DC41	Tulare	FAS 1140		Across Peoples Ditch		8/11/48	Trewhitt, Shields & Fisher	Steel Bridge	34,190	5,000	*39,190

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
14DC19	Tulare	FAS 1142		Across Kings River about 5.5 Mi. W. of Dinuba		6/ 4/47	Carl N. Swenson Co., Inc.	R.C. Girder Bridge	$190,875	$5,581	$196,456
	Tulare			Various Locations				Minor Contracts & D.L. Projects	9,152	172	9,324
10TC16	Tuolumne	13	Sra	In Sonora on Stockton St.	0.4	1/24/47	Beerman & Jones	Grading & Plant Mixed Surf.	79,299	16,767	96,066
14TC34	Tuolumne	40	A, B	Tuolumne River at Stevens Bar	0.2	12/26/47	Elmer J. Warner	Bridge & Approaches	189,900	15,000	*204,900
	Tuolumne			Various Locations				Minor Contracts & D.L. Projects	12,337		12,337
7VC83	Ventura	2	C	1.1 Mi. W. of Montalvo		6/29/48	Jesse S. Smith & A. A. Edmondson	Scales & Approaches	48,005	4,500	*52,505
7VC30	Ventura	2	C, Ven	Bet. Montalvo & Ventura	3.4	2/ 4/47	J. E. Haddock, Ltd.	Grading & Paving	606,869	62,800	*669,669
7VC32	Ventura	2, 9, 79	C, A, Ven	At Inter. of Ventura Blvd. with Telephone & Telegraph Rds.		3/24/47	L. H. Leonardi Elect. Contr. Co.	Traffic Signals	36,485	1,523	38,008
7VC61	Ventura	2, 60	C, B	Jct., Route 2 & Route 60 near El Rio	1.3	2/20/48	Smith-Edmondson Co.	Surfacing	167,635	23,500	*191,135
7VC69	Ventura	2, 60	C, B	Jct., Route 2 & Route 60 near El Rio		3/29/48	Tri-Cities Elec. Serv.	Signals	21,628	2,000	*23,628
7VC77	Ventura	2	Ven	In Ventura		6/11/48	Tri-Cities Elec. Serv.	Signals	37,467	2,702	*40,169
7V63	Ventura	60	A	Bet. Oxnard & Big Sycamore		3/25/47	Day Labor	Road Repairs	8,344		8,344
7VC36	Ventura	60	A	Bet. Oxnard & Big Sycamore Cr.	5.7	5/ 5/47	Baker & Pollock	Resurfacing with P.M.S.	87,190	6,202	93,392
7VMC24	Ventura	60	Oxn	On Oxnard Blvd. in Oxnard		4/22/48	Elec. & Mach. Serv., Inc.	Signals	11,536		11,536
7X48	Ventura	79	A	Bet. Sta. 486 & Sta. 513	0.5	2/21/46	Day Labor	Improve Drainage	5,194		5,194
7XC34	Ventura	79	A	Ellsworth, Barranca & Santa Paula	4.0	5/ 9/47	O'Brien & Bell Const. Co.	P.M.S. & Shldrs.	23,927	1,191	25,118
7XL14	Ventura	138	B	N. Fork Matilija Cr., Br. No. 52-173		5/16/46	Day Labor	Replace Bridge	30,526	2,300	*32,826
7V100	Ventura	138	Ven	In Ventura, Bet. Main St. & North City Limits	0.65	1/17/48	Day Labor	Resurfacing	7,935		7,935
7DC3	Ventura	FAS 868		On Pleasant Valley Rd., & Wood Rd., Bet. Ventura County R.R. & Ventura Blvd.	6.5	6/26/47	Frank T. Hickey, Inc.	Plant Mixed Surf.	154,179	15,800	*169,979

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
7DC1	Ventura	FAS 877		On Las Posas Rd., Bet. State Hwy. Rte. 2 & State Hwy. Rte. 153	4.3	12/ 6/46	MacDonald & Kruse, Inc.	Surfacing	$68,575	$6,042	$74,617
	Ventura			Various Locations				Minor Contracts & D.L. Projects	19,572	400	19,972
3WC7	Yolo	6, 99	A, B	Bet. 1 Mi. E. of Davis & Swingle & Bet. 2.25 Mi. N. of Arcade Sta. & Js. Rte. 6	7.3	5/21/46	A. Teichert & Son, Inc.	Repair with P.M.S. & C.R.B.	74,047	5,182	79,229
3WC12	Yolo	7, 87	A, A	Bet. 1.9 Mi. N. of Solano Co. Line & 1.6 Mi. S. of Woodland & Bet. 0.3 Mi. & 3.9 Mi. N. of Woodland	4.9	6/18/47	McGillivray Const. Co.	Plant Mixed Surfacing	45,613	2,282	47,895
3WC10	Yolo	7, 87	A,Wd,A	Bet. 1.25 Mi. N. of Solano Co. Line & Woodland & Bet. 3.75 Mi. N. of Woodland & 1 Mi S. of Knights Landing	9.2	4/16/47	McGillivray Const. Co.	P.M.S. & Seal Coat	87,174	7,553	94,727
14TC13	Yol,Sol	7	A, E	See Solano County							
O-3TC48	Yolo	7, 87	A, B, Wd, A	Putah Cr. to Zamora & Woodland to Knights Landing	24.6	4/10/48	Munn & Perkins	Grade & Surface	45,792	5,000	*50,792
3TC25	Yolo	7	B, C	Bet. Cache Cr. & Dunnigan	14.0	5/21/46	Fredrickson Bros.	Repair with P.M.S. & C.R.B. & Place Imp. Borrow on Shldrs	153,896	10,552	164,448
3T65	Yolo	7	C	Bet. Zamora & Hershey	10.9	4/17/47	Day Labor	Prime & Seal Shldrs	11,134	500	*11,634
14WLC32	Yolo	50	E	At Tule Canal about 6 Mi. E. of Woodland		6/25/46	M. A. Jenkins	Bridge & Approaches	87,102	9,317	96,419
3WC13	Yolo	50	E	At W. Side of Yolo By-pass	0.1	7/29/47	H & D Const. Co.	Grading & Surfacing	33,813	3,808	37,621
3TC53	Yolo	50	F	North end of Sacramento Wier	0.2	5/27/48	A. Teichert & Son, Inc.	Grade & Surface	14,797	2,200	*16,997
3WC8	Yolo	87	A	Bet. Woodland & Knights Landing	9.5	6/26/46	Folsom & Drollinger	Crusher Run Base Borders	35,221	2,313	37,534
3WC11	Yolo	99	A	Bet. Solano Co. Line & 2 Mi. S. of Irrigation Canal	8.9	5/15/47	McGillivray Const. Co.	Construct Shldrs	27,665	1,282	28,947
14DC7	Yolo	FAS 1154 1152		Across Moody Slough & Across Cache Cr.		3/ 7/47	Chittenden & Chittenden	Two Bridges	74,252	7,600	*81,852

COMPLETED CONTRACTS—June 30, 1949—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Const. cost	Const. engr.	Total
14DC39	Yolo	FAS 1155		Cache Creek		8/ 9/48	Chas. T. Brown Co.	Reconstruct Bridge	$71,471	$6,040	$*77,511
3DC8	Yolo	FAS 1156		Route 99 to Clarksburg	4.5	5/ 6/48	A. Teichert & Son, Inc.	Grade & Pen. Tr.	93,351	7,000	*100,351
14DC31	Yolo	FAS 1158		Knights Landing Ridge Cut Canal		11/17/47	Chittenden & Chittenden	Timber Trestle Bridge	50,243	5,000	*55,243
	Yolo			Various Locations				Minor Contracts & D.L. Projects	18,154	85	18,239
3T43	Yuba	3	A	At Grasshopper Slough Overflow		4/22/46	Day Labor	Replace Timber Structure with C. M.P. Culvert & Fill	5,344		5,344
3TC18	Yub, Sut	3, 87	BA, B	On Rte. 3 Bet. Morrison's Crossing & Linda Corners, Bet. Yuba City & Lomo, & on Rte. 87, Bet. Sutter By-pass & Tudor Rd.	12.2	6/ 4/45	Lester L. Rice	Repair with Imp. Bor. & P.M. Bit. Matl.	100,700	5,463	106,163
3TC28	Yub, Sut	3	Mvl, Y.C.	Bet. D St. Bridge in Marysville & Rte. 15 in Yuba City	2.0	6/22/46	Lester L. Rice	A.C. Surfacing	672,120	56,000	*728,120
14TC5	Yub, Sut	3	Mvl, Y.C.	Bet. I St. in Marysville & Market St. in Yuba City	0.9	12/19/45	J. H. Pomeroy & Co., Inc.	Bridge & Approaches	1,853,359	84,327	1,937,686
3TC47	Yub, Sut	3	Mvl, Y.C.	"D" St. Bridge to Live Oak Road	2.0	2/17/48	Huettig & Schromm	Landscaping	38,885	8,200	*47,085
3TC42	Yub, Sut	3	Mvl, Y.C.	"D" St. Bridge to Route 15 in Yuba City		11/ 5/47	Tri-Cities Elec. Serv.	Signals & Lighting	82,940	6,500	*89,440
14WLC37	Yuba	87	A	At Simmerly Slough		7/11/46	Lord & Bishop	Timber Bridge	13,641	1,135	14,776
14DC21	Yuba	FAS 921		Plumas School to FAS Route 922	1.2	9/10/47	H. Earl Parker, Inc.	Grade, Imp. Bor. & 2 Bridges	91,079	12,262	*103,341
	Yuba			Various Locations				Minor Contracts & D.L. Projects	8,929		8,929

INCOMPLETE CONTRACTS

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
I-4TC77	Alameda	5	D, B	Castro Valley Junction to San Leandro	3.3	4/ 1/49	Lee J. Immel	Surfacing	$268,158
I-4TC86-F	Alameda	5	E, F, B	Greenville to 1.5 Mi. W. of Livermore	5.8	6/22/49	Harms Bros. & N. M. Ball Sons	Grade, Surface & Lighting	953,990
O-4TC72	Alameda	5	F	1.5 Mi. E. to 1.7 Mi. W. of Livermore	3.2	10/19/48	Dan Caputo & Ed Keeble	Grade & Structures	542,352
O-14TC52	Alameda	5	Oak	S.F.-Oak Bay Bridge Toll Plaza	------	7/22/48	Stolte, Inc., & Duncanson-Harrelson Co.	Toll Facilities	498,236
O-4TC67	Alameda	5	Oak	S.F.-Oak Bay Bridge Toll Plaza	0.7	8/25/48	Lee J. Immel	Grade, PMS, & Lighting System	202,866
O-14LKC3	Alameda	69	Ala	San Leandro Bay	------	5/20/49	The Duncanson-Harrelson Co.	Repair Bridge	28,153
I-4TC76	Alameda	69	B	Alvarado to San Leandro	5.4	4/ 1/49	Clements & Co.	Resurface & Reconstruct Shoulders	178,657
O-4TC48-F	Alameda	69	Oak	Bet. 38th Ave. & Oak St.	2.9	4/ 1/48	Fredrickson & Watson Const. Co.	Grade & Surface	1,488,810
I-14TC64-F	Alameda	69	Oak	At High St.	------	4/ 1/49	A. Soda & Son	Overhead	747,250
O-4TC83F	Alameda	69	Oak	South City Limits to High St.	3.3	5/20/49	Frederickson & Watson Const. Co.	Grade, Pave, & Structures	1,459,152
O-14TC53-F	Alameda	69	Oak	Eastshore Freeway, 50th Ave. to 38th Ave.	0.7	8/ 3/48	Johnson, Drake & Piper, Inc.	Grade, Pave, & Structures	1,746,972
4T116	Alameda	69, 105	Oak	At three locations	------	6/24/49	Day Labor	Signals & Lighting	19,100
I-4TC78	Alameda	105, 5	Hay	Through Hayward	1.8	4/ 1/49	Lee J. Immel	Plant Mixed Surfacing	97,131
4DC10	Ala, CC	FAS 801		Crow Canyon Road	1.8	7/8/48	Louis Biasotti & Son	Grade & Pave	225,000
	Alameda			Various Locations				Minor Contracts & D.L. Projects	20,974
	Alpine			Various Locations				Minor Contracts & D.L. Projects	159
O-10TC40	Amador	34	F	Cooks Station to E. of Hams Station	3.6	11/17/48	Westbrook & Pope	Grade & Surface	164,049
10T65	Amador	65	C	0.6 Mi. to 1.2 Mi. N. of Mokelumne River	0.6	4/ 6/48	Day Labor	Grade & Surface	20,000
	Amador			Various Locations				Minor Contracts & D.L. Projects	1,109
I-3TC57	Butte	21	B	Oroville to Feather River	4.1	4/12/49	Rice Bros., Inc.	Surface & Seal Coat	63,424
O-14TC66	Butte	87	B	Across Butte Creek	------	5/12/49	Lew Jones Const. Co.	Replace Bridge	24,704

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
3DC11	Butte	FAS 757		2 Mi. E. of Chico to Paradise	9.2	11/19/48	Granite Const. Co.	Grade, Surface, & Structures	$388,500
3DC14	Butte	FAS 758		Cherokee Canal to Pennington Rd.	3.7	6/ 7/49	W. H. O'Hair Co.	Grade, Surface, & Widen 2 Bridges	110,500
3DC16	Butte	FAS 759		Oroville-Wyandotte Rd. to Oroville-Quincy Hwy.	2.3	6/22/49	Richter Bros.	Grade & Install Culverts	50,700
	Butte			Various Locations				Minor Contracts & D.L. Projects	1,600
	Calaveras			Various Locations				Minor Contracts & D.L. Projects	8,319
I-3TC58	Col, Gle	7	B, Wms, C, A	S. of Williams to S. of Willows	26.3	4/19/49	Westbrook & Pope	BST to Shoulders	35,288
COFC-2	Contra Costa	7	A	Bridge across Carquinez Strait		1/ 4/49	Ben C. Gerwick, Inc.	Repair Fender	61,023
0-4TTC7-P	Contra Costa	14	Pin	At San Pablo Ave. & Tennent Ave.		6/ 9/49	L. H. Leonardi Electric Co.	Signals & Lighting	9,685
4W39	Contra Costa	69	ECr	At Potrero Ave.		11/ 1/46	Day Labor	Signal	8,250
0-4GC17-P	Contra Costa	69	Rch	Bet. 47th St. & Garrard Blvd.		2/24/49	Tri-Cities Elec. Serv., Inc.	Signals & Lighting	58,194
I-4TC84	Contra Costa	75	A, WlC	3.5 Mi. E. of Broadway Tunnel to Rte. 107	5.6	5/ 9/49	J. R. Armstrong	Grade & Surface	328,106
I-4TC79	Contra Costa	106	C	Martinez Rd. to Willow Pass	3.6	4/ 1/49	Gallagher & Burk, Inc.	Plant Mixed Surfacing	164,919
4DC10	CC-Ala	FAS 801		See Alameda County					
	Contra Costa			Various Locations				Minor Contracts & D.L. Projects	5,400
I-ITC34	Del Norte	1	A, B	Richardson Creek to S. of Crescent City	6.3	4/ 1/49	Harms Bros. & C. M. Syar	Plant Mixed Surfacing	269,125
1TC27	Del Norte	46	A	At Turwar Creek, about 3 Mi. E. of Klamath	0.7	5/ 5/48	Baldwin Straub Corp. & Arthur B. Siri, Inc.	Bridge & Approaches	206,963
I-ITC35	Del Norte	81	A	At Bear Creek	0.3	4/ 7/49	C. E. Johnson	Grade & Surface	34,743

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
14DC42	Del Norte	FAS 984		At Hunter Creek		8/13/48	Baldwin Straub Corp. & Arthur B. Siri, Inc.	Bridge & Approaches	$63,350
14DC34	Del Norte	FAS 985		Across Smith River, about 12 Mi. NE. of Crescent City		3/11/48	Underground Const. Co.	Bridge	86,550
	Del Norte			Various Locations				Minor Contracts & D.L. Projects	1,220
3T86	El Dorado	93	A	Placerville to Georgetown	1.1	6/14/48	Day Labor	Widen & Surface	45,000
3DC12	El Dorado	FAS 1095		Diamond Springs to Bell Ranch	4.7	1/19/49	M. W. Brown	Grade & Seal Coat	95,500
3DC15	El Dorado	FAS 1097		Lotus-Rescue Rd. to Rte. 65	3.9	6/27/49	Tyson & Watters Co.	Grade & Surface	58,400
	El Dorado			Various Locations				Minor Contracts & D.L. Projects	3,500
I-6TC18	Fresno	4	B, Fre	Church Ave. to Broadway	1.2	5/ 6/49	Jannoch Nurseries	Landscaping	22,429
0-14TC44-P	Fre, Mad	4	C, A	San Joaquin River N. of Herndon	1.0	6/10/48	Erickson, Philips & Weisburg	Bridge & Approaches	695,909
	Fresno			Various Locations				Minor Contracts & D.L. Projects	20,912
I-3TC62	Glenn	7	A, Wlos, B, C, Orl	0.3 Mi. S. or Willows to Tehama County Line	19.7	5/20/49	W. C. Railing	Resurfacing	75,125
I-3TC58	Gle, Col	7	A, B, Wms, C	See Colusa County					
I-14TC60	Glenn	47	A	Glenn-Colusa Irrigation Canal		4/ 1/49	Shaul Const. Co.	Repair Bridge	14,153
	Glenn			Various Locations				Minor Cntracts & D.L. Projects	660
0-ITC25	Humboldt	1	E, F, Fta	Bet. N. Scotia Bridge & 16th St., in Fortuna	2.8	4/28/48	Mercer, Fraser Co.	Grade & Pave	564,072
0-14KC18	Humboldt	1	H	At Eureka Slough		7/20/48	A. Verne Turner	Paint Bridge	4,125
I-ITC31-F	Humboldt	1	J	Stone Lagoon Summit to S. of Orick	3.8	4/ 5/49	Piombo Const. Co.	Grading	731,544
I-ITC33	Humboldt	1	K	7.6 Mi. to 10.4 Mi. N. of Orick	2.8	4/1 /49	Mercer, Fraser Co., Inc.	Surfacing	111,523

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
I-14TC61	Humboldt	46	E	At Camp Creek	------	4/ 1/49	G. M. Carr & Bati Rocca	Reconstruct Bridge	$49,410
0-1TC29	Humboldt	46	F	Bet. Pearch Creek & 0.8 Mi. northerly	0.9	8/23/48	Fred J. Maurer & Sons	Grade, IB, & Culvert	118,335
14WC16-P	Humboldt	84, 46	B, C, D	Klamath River at Weitchpec	0.6	9/23/47	Guy F. Atkinson Co.	Bridge & Approaches	393,038
1DC7	Humboldt	FAS 976	----------	Bull Creek Flat State Park to 7.3 Mi. westerly	7.3	7/21/48	John Burman & Sons	Grading	172,000
1DC8	Humboldt	FAS 977	----------	Whittemore Grove State Park to 2.5 Mi. westerly	2.5	7/20/48	M. Malfitano & Son, Inc. & Macal Improvement Co., Inc.	Grading	81,000
	Humboldt	-------	----------	Various Locations	------	-------	----------	Minor Contracts & D.L. Projects	19,080
I-11VC42	Imperial	12	B, C	Plaster City to El Centro	6.0	4/21/49	Roland T. Reynolds	Road Mixed Surfacing	42,609
I-11VC44	Imperial	187, 201	BC, AB	Holtville to Brawley & Heber to Brawley	3.4	5/ 6/49	Warren Southwest, Inc.	Surfacing	41,380
11DC3	Imperial	FAS 649	----------	N. of New River to W. of Calipatria	20.1	4/29/49	Hensler Const. Corp.	Surfacing	409,100
	Imperial	-------	----------	Various Locations	------	-------	----------	Minor Contracts & D.L. Projects	3,775
0-9VC22	Inyo	23	D, Bis, E	At Bishop	0.4	6/14/49	Bishop Engr. & Const. Co.	Resurface	46,099
I-9VC19	Inyo	23	L, M, A, D	Lone Pine to Bishop	18.1	5/ 6/49	Oilfields Trucking Co. & Phoenix Const. Co., Inc.	Surface Shoulders	56,687
I-14VC85	Inyo	76	A	Owens River & Lower McNally Canal	------	4/26/49	Jas. R. Mathews Excav. Co.	Structures & Approaches	46,037
9V26	Inyo	212	D, E	Shoshone to State Line	19.6	6/29/49	Day Labor	Improve Roadway	25,000
I-6VC33	Kern	4	A	Fort Tejon to N. of Grapevine	5.0	4/19/49	Hensler Const. Corp.	R. C. Traffic Deflector	205,543
0-6VC36	Kern	4	B, C	Grapevine Station to Switzers	19.1	6/22/49	Griffith Co.	P.M.S. Borders	38,612
0-6VC20	Kern	4	C	Bet. Hoskins Road & Brundage Lane	5.1	5/19/48	Griffith Co.	Grade & Pave	774,883
0-6VC24	Kern	4	C	South Chester Ave. & Strader Grade Crossing	------	6/28/48	L. H. Leonardi Elec. Const. Co.	Siganls & Lighting	12,393

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
I-6VC30	Kern	4	D, E	Snow Road to Cawelo	7.6	4/ 1/49	Peter Kiewit Son's Co.	Resurface	$110,686
6V41	Kern	4, 140	BC, B	Grapevine to Switzers on Rte. 4 & Mile 6.74 to Rte. 4 on Rte. 140	29.8	7/12/48	Day Labor	Stripe & Shoulders	11,450
1-9VC21	Kern	23	B	Mojave to 0.8 Mi. north	0.8	6/ 2/49	Davis & Swartz	Grade & Surface	39,937
0-9VC17	Kern	23	C	Ittners to Ricardo	0.4	3/ 2/49	Peterson Const. Co.	Embankment Protection	20,219
0-9VC23	Kern	58	A, B	Mojave to San Bernardino County Line	11.5	6/25/49	G & H Paving Co.	Seal Coat	14,770
I-14VC81	Kern	58	K	At Jerry Slough		4/ 1/49	W. E. Thomas Const. Co.	Bridge & 2 Culverts	14,642
I-6VC34	Kern	140	D	At Hill Creek		5/ 6/49	Anderson Co.	Cattlepass	6,358
0-14VC61	Kern	142	B	At Granite Canyon		7/17/48	Anderson Co.	Bridge & Approaches	52,155
I-9VC18	Kern	212	A	Naval Ordnance Station to San Bernardino Co. Line	4.0	4/23/49	Rand Const. Co., Inc.	Surfacing	25,160
	Kern			Various Locations				Minor Contracts & D.L. Projects	16,595
I-6TC17	Kings	125	C	Kettleman City to 5th Standard Parallel	5.3	5/ 6/49	Gene Richards	Grade, I.B., & Surface	100,400
0-6TC14	Kings	125	D	Stratford to 1.8 Mi. north	1.9	7/27/48	Oilfields Trucking Co. & Phoenix Const. Co.	Grade, R.M.S., & R.C. Bridge	205,436
	Kings			Various Locations				Minor Contracts & D.L. Projects	1,770
ITC21	Lake	49	B	At Coyote Creek about 6 Mi. N. of Middletown	0.5	3/ 2/48	Harold Smith	Bridge & Approaches	70,771
I-ITC32	Lake	49	B	1.3 Mi. to 5.9 Mi. N. of Putah Creek	1.4	4/ 1/49	Chittenden & Chittenden	Grade, Surface & Seal Coat	149,640
IT64	Lake	89	B, C, D	Middletown to Kelsey		7/ 1/48	Day Labor	Grade & Surface	53,200
	Lake			Various Locations				Minor Contracts & D.L. Projects	3,940
0-2TC24	Lassen	29	B	Bet. Fredonyer Pass & Susan River	6.3	4/ 9/48	Sheldon Oil Co.	Base & P.M.S.	87,524
2T74	Lassen	73	D	Litchfield to Ravendale	3.0	12/14/48	Day Labor	Grade & Surface	86,700
2DC9-P	Las, Mod	FAS 988		Hayden Hill Road to Rte. 28	13.1	7/27/48	Harms Bros. & M. W. Brown	Grade & Seal Coat	318,500

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
	Lassen			Various Locations				Minor Contracts & D.L. Projects	$2,737
0-7VC89-F	Los Angeles	2	C	Through Malibu Junction	3.2	8/25/48	Peter Kiewit Sons' Co.	Grade, Surface & 3 Bridges	695,286
0-7VC107	Los Angeles	2	L.A.	Normandie Ave. to Alexandria Ave.	0.2	4/ 8/49	McClain Const. Co.	Outer Highways	31,396
0-14VC84	Los Angeles	2	L.A.	At Los Angeles Street		4/23/49	J. E. Haddock, Ltd.	Two Overcrossings	450,283
0-7VC95	Los Angeles	2	L.A.	Vineland Ave. to Barham Blvd.	1.8	11/19/48	Henry C. Soto Corp.	Landscape	26,749
0-7VC120-F	Los Angeles	2	L.A.	Virgil Ave. to Grand Ave.	1.6	6/ 9/49	N. M. Ball Sons	Grade & Surface	1,358,067
0-14VC76	Los Angeles	2	L.A.	At Western Ave.		12/15/48	Oberg Bros. Const. Co.	Overcrossing	704,764
0-14VC65-FP	Los Angeles	2	L.A.	At Melrose Ave. & Vermont Ave.		9/ 2/48	Spencer Webb Co.	Undercrossing & Overcrossing	1,008,507
0-14VC79	Los Angeles	2	L.A.	At Heliotrope Drive		2/17/49	Chas. MacClosky Co.	Undercrossing	532,090
0-14VC75	Los Angeles	2	L.A.	At Santa Monica Blvd. & Normandie Ave.		11/16/48	J. E. Haddock, Ltd.	Two Structures & Approaches	604,492
0-7VC127-F	Los Angeles	2	L.A.	Glendale Blvd. to Grand Ave.	1.2	6/24/49	N. M. Ball Sons	Grade & Surface	1,000,974
0-14VC77	Los Angeles	2	L.A.	At Glendale Blvd.		1/13/49	J. E. Haddock, Ltd.	Two Undercrossings & Apprs.	493,456
0-14VC64-F	Los Angeles	2	L.A.	At Spring Street		8/23/48	Oberg Bros. Const. Co.	Overcrossing	230,161
14VC49-F	Los Angeles	2	L.A.	At Figueroa Street		2/27/48	Carlo Bongiovanni	Four Undercrossings & Two Ramp Separations	1,050,000
0-7VC96	Los Angeles	2	L.A.	Hill St. to Spring St.		1/18/49	Guy F. Atkinson Co.	Grade, Pave & Structures	958,545
0-14VC80	Los Angeles	2	L.A.	At East Edgeware Road		3/ 1/49	J. E. Haddock, Ltd.	Overcrossing	124,632
0-7VC99	Los Angeles	2	L.A, D	Soto St. to Eastman Ave.	1.98	1/ 7/49	Huettig & Schramm	Landscape	48,009
14VC32-FP	Los Angeles	2, 165	L.A.	Int. of Hollywood Parkway & Arroyo Seco-Harbor Parkway		6/24/47	James I. Barnes Const. Co.	4 Level Structure	1,367,200
I-7VC125-P	Los Angeles	4	Brb	San Fernando Blvd. to Burbank Blvd.	0.8	6/ 9/49	Griffith Co.	Grade & Pave	210,194
0-7VC109	Los Angeles	4	J	N. of Los Alamos Creek to S. of Rte. 59	6.7	4/14/49	Peter Kiewit Sons' Co.	Grade, Surface & Structure	934,337
0-7VVC11-P	Los Angeles	9	Cla	Foothill Blvd. at Indian Hill Blvd.		6/28/49	Paul R. Gardner	Signals & Lighting	10,265
0-7VVC9-P	Los Angeles	26,172	A, MonP, Mtbl.	Garvey Ave. at Denton Ave. & 3rd St. at Garfield Ave.		4/27/49	Prescott Elec. & Mfg. Co.	Signals & Lighting	13,950
0-7VC92	Los Angeles	60	A	Malibu Creek to Las Flores Creek	2.9	10/11/48	Dicco, Inc. & Dix-Syl Const. Co., Inc.	Grade, Surface & Structures	522,977
0-7VC97	Los Angeles	60	A	Solstice Canyon to Malibu Creek	3.3	1/ 4/49	Stephen L. Vistica	Landscape	12,258
7V86	Los Angeles	60	B	0.4 Mi. Nly. of Los Angeles City Limits		11/17/47	Day Labor	Reconstruct Culvert	16,300

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
7VV65	Los Angeles	60, 179	L Bch	At Pacific Coast Highway & 7th Street		2/ 3/49	Day Labor	Signals	$5,500
7V122	Los Angeles	62	B	North Fork of San Gabriel River		5/ 5/48	Day Labor	Replace Bridge	11,500
7V139	Los Angeles	77	A, EMte	San Bernardino Road to Rte. 26		12/14/48	Day Labor	Drainage Improvement	13,500
0-7VC101	Los Angeles	77	EMte, A	San Bernardino Road to Rte. 26	1.1	1/12/49	M. S. Mecham & Sons & Boddum & Peterson	Plant Mixed Surfacing	204,477
0-7VC104	Los Angeles	77	EMte A,	San Bernardino Road to Garvey Ave.		1/20/49	Prescott Elec. & Mfg. Co.	Signals & Lighting	15,050
7V145	Los Angeles	155	A	Decker Canyon Road	4.2	6/ 9/49	Day Labor	B.S.T. & Extend Culverts	15,200
I-7VC112	Los Angeles	158	B, L.A.	Playa St. to E.C.L. of Culver City	1.0	4/21/49	J. E. Haddock, Ltd.	Widen & Resurface	79,454
7V141	Los Angeles	158	L.A.	From near San Fernando Mission to Pacoima Wash		12/30/48	Day Labor	Storm Channel	45,000
I-7VC117	Los Angeles	161	Brb	W.C.L. of Burbank to Victory Blvd	2.6	5/26/49	Schroeder & Co.	Resurface	68,937
0-7VC102	Los Angeles	165	L.A.	Bet. Bartlett St. & Figueroa Terrace	0.2	1/12/49	Jesse S. Smith	Grade & Pave	104,280
0-14VC67-F	Los Angeles	166	A	La Verne Ave. to Eastland Ave.	0.9	9/15/48	Griffith Co.	Grade, Pave & Structures	1,507,485
0-7VC106	Los Angeles	166, 167	A, A	Bet. La Verne & Eastland Ave.		2/ 3/49	Econolite Corp.	Signals & Lighting	96,432
7VV42	Los Angeles	167	L Bch	At Various Intersections		12/ 7/48	Day Labor	Signals	5,000
I-7VC122	Los Angeles	167	Lyn, SGt	Bet. S.C.L. of Lynwood & Patata Street	1.7	6/ 7/49	C. O. Sparks, Inc. & Mundo Engineering Co.	Resurface	54,190
0-7VC114	Los Angeles	167	SGt, A	At Patata Street		5/ 6/49	Vido Kovacevich Co.	Drainage Facilities	17,442
0-7VC98	Los Angeles	168	A, B	Firestone Blvd. to Whittier Blvd.		12/23/48	Econolite Corp.	Signals & Lighting	55,397
0-7VC94	Los Angeles	168	A, B	Bellflower Blvd. to Beverly Blvd.	5.9	11/19/48	Vido Kovacevich & Vido Kovacevich Co.	Grade & Surface	622,486
7V140	Los Angeles	168	A, B	Bellflower Blvd. to Beverly Blvd.	5.9	12/30/48	Day Labor	Signs & Stripe	5,000
0-7VC115	Los Angeles	168	B, C	Bet. Beverly Blvd. & Garvey Ave.	4.3	5/12/49	J. E. Haddock, Ltd.	Grade & Surface	494,309
0-7VC128	Los Angeles	168	B, C	Bet. Beverly Blvd. & Garvey Ave.		6/24/49	C. D. Draucker, Inc.	Signals & Lighting	44,575
I-7VC113	Los Angeles	170	A	Orangethrope Ave. to Firestone Blvd.	3.4	4/21/49	John J. Swigert Co.	Plant Mixed Surfacing	65,686

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
0-7VC103	Los Angeles	174	SGt	On Firestone Blvd. apprs. to Los Angeles Riv. Bridge	0.6	1/12/49	O'Brien & Bell Const. Co.	Grade & Pave	$163,975
I-14VC82	Los Angeles	178	A	At San Gabriel River	0.5	4/ 8/49	R. M. Price Co. & O. B. Pierson	Bridge & Approaches	297,281
7V132	Los Angeles	205	L.A.	Arroyo Seco Parkway		6/26/48	Day Labor	Safety Devices	58,250
0-7VC116	Los Angeles	205	SPas	At Orange Grove Ave. & Fair Oaks Ave.		5/21/49	Elec. & Machinery Serv. Inc.	Lighting	6,236
14DC35	Los Angeles	FAS 825		Across North Fork of San Gabriel River		4/ 9/48	Norman I. Fadel	Steel Bridge	397,000
14DC49	Los Angeles	FAS 849		Across the Santa Fe Dam Outlet Works		4/14/49	C. B. Tuttle Co.	R. C. Bridge	69,000
14DC50	Los Angeles	FAS 852		Across San Gabriel River on Valley Blvd.	0.5	6/ 9/49	W. J. Disteli	Bridge & Approaches	637,000
	Los Angeles			Various Locations				Minor Contracts & D.L. Projects	71,626
0-14TC44P	Madera	4	A, C	See Fresno County					
I-6TC16-F	Madera	4	B	Bet. 0.25 Mi. N. of Dry Creek & 0.5 Mi. N. of Berenda	2.7	4/20/49	Guy F. Atkinson Co.	Grade, P.C.C., & R.C. Bridge	363,486
14DGTC1-P	Madera	126	B	At the A.T. & S.F. R.R. East of Madera	0.6	3/26/48	Trewhitt-Shields & Fisher	Underpass & Approaches	144,782
	Madera			Various Locations				Minor Contracts & D.L. Projects	2,435
I-14TC58	Marin	8	A	At Petaluma Creek		4/ 1/49	Evans Const. Co.	Redeck Bridge	29,210
0-4TC66	Marin	8	A	Igancio Wye to County Line	3.1	12/ 3/48	Parish Bros.	Grade & Surface	408,008
	Marin			Various Locations				Minor Contracts & D.L. Projects	8,050
	Mpa			Various Locations				Minor Contracts & D.L. Projects	5,149
ITC24	Mendocino	1	C, D	1.5 Mi. S. to 3.5 Mi. N. of Forsythe Creek	5.2	4/14/48	Guy F. Atkinson Co.	Grade, P.M.S. & Bridge	945,828
I-ITC36	Mendocino	1	H	Sherwood Road to Sapp Creek	8.4	4/ 1/49	Clements & Co.	Plant Mixed Surfacing	308,994
I-ITC37	Mendocino	48	A	Maple Creek to 1.2 Mi. Easterly	1.2	5/20/49	A. R. McEwen	Grade, Surface & Seal Coat	122,056
14TC29-P	Mendocino	48, 56	C, CD	Navarro River, 4 Mi. S. of Albion	0.8	11/ 6/47	Johnson Rock Co.	Bridge & Approaches	419,132

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
0-ITC26	Mendocino	56	A	At St. Ores Creek, about 11.5 Mi. S. of Point Arena	0.5	5/ 5/48	Arthur B. Siri, Inc. & Baldwin Straub Corp.	Grade, R.M.S., & Culvert	$75,361
0-14TC65	Mendocino	56	D	Across Big River		5/ 5/49	Metzger Company	Repair Bridge	98,340
I-14TC69	Mendocino	56	D	At Salmon Creek, 0.6 Mi. S. of Albion		6/22/49	Judson Pacific Murphy Corp.	Bridge	344,882
0-ITC28	Mendocino	56	F	At Virgin Creek	0.3	6/ 7/48	John Burman & Sons	Grade, Surface & Bridge	62,875
1DC10	Mendocino	FAS 979		Bet. Rte. 1 S. of Hopland & Rte. 70 at Talmadge	10.4	4/ 1/49	Nevada Constr. Inc.	Grade & Surface	174,500
	Mendocino			Various Locations				Minor Contracts & D.L. Projects	12,610
0-10TC38-P	Merced	4	C, D, Lvtn	Atwater to Livingston	5.7	9/ 8/48	Guy F. Atkinson Co.	Grade & Pave	616,932
0-10TC41	Merced	4	Lvtn	At Cressy Way		12/ 4/48	R. Goold & Son	Siganls & Lighting	13,450
I-10TC42	Merced	32	B	Highline Canal to Los Banos	2.0	4/ 1/49	Granite Const. Co.	Plant Mixed Surfacing	56,000
0-10TC49	Merced	123	B	Cox Ferry Bridge to Snelling	6.3	6/ 1/49	River Rock, Inc.	Widen & Surface Shoulders	40,000
	Merced			Various Locations				Minor Contracts & D.L. Projects	7,751
I-2TC34	Modoc	28	C	Toms Creek to Cedarville	8.1	5/24/49	R. B. Guerin & Co.	Grading	650,000
2T72	Modoc	73	B	South Willow Ranch Rd. to New Pine Creek	7.6	10/11/48	Day Labor	Oiling	10,000
2DC9-P	Mod, Las	FAS 988		See Lassen County					
9V24	Mono	40	A	Park Boundary to Poole Plant Road	2.5	7/21/48	Day Labor	Widen & Resurface	56,985
I-9VC20	Mono	76	A, B	South County Line to Benton Station	8.7	5/11/49	Arthur A. Johnson	Surfacing	61,167
I-5TC12	Monterey	2	G, F	San Ardo to King City	4.0	5/19/49	Fredericksen & Kasler	Surfacing	194,329
5T23	Monterey	2	J	1 Mi. N. of Hoodvale		7/29/48	Day Labor	Outer Highway	14,000
0-5TC11	Monterey	56	A	At Salmon Creek		8/ 9/48	Matthew & Jorgenson	Culvert & Approaches	99,204
	Monterey			Various Locations				Minor Contracts & D.L. Projects	10,175

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
0-10TC36	Nap, Sol	7	A, H	See Solano County					
4T111	Napa	49	A	N. of Calistoga to Lake County Line	6.0	8/11/48	Day Labor	Resurfacing	$50,000
0-4TC73	Napa	74, 8	A, B	Bet. Kelly Curve & Glass House Curve and bet. Rte. 74 & Old Napa Wye	2.4	11/ 5/48	Fredrickson Bros.	Grade & Pave	314,225
4DC12	Napa	FAS 776		Bet. inter. of Rte. 8-B with Imola Ave. & inter of Rte. 8-A with Foster Rd. and on S. Jefferson St. to So. City Limits of Napa	1.7	11/22/48	A. Teichert & Son, Inc.	Grade & P.M.S.	115,850
	Napa			Various Locations				Minor Contracts & D.L. Projects	4,459
I-3TC63	Nevada	15	A	At Squirrel Creek, 5.0 Mi. W. of Grass Valley	0.1	6/22/49	Miles & Bailey	Grade, Surface, & Culvert	32,211
I-3TC64	Nevada	38	A	In Truckee	0.5	6/23/49	J. Henry Harris	Grade & Surface	69,353
0-7VC85	Orange	43	B	Bet. Heim Ave. & Peralta School	4.9	7/29/48	Peter Kiewit Sons' Co.	Grade & P.M.S.	822,683
0-7VC118	Orange	175	B	At Yorba Road	0.5	5/26/49	K & H Company	Grade & Surface	49,781
I-7VC111	Orange	176	A	At Coyote Creek		4/20/49	Jas. R. Mathews Excav. Co.	Culvert	11,649
0-14VC73	Orange	178	A	Across Santa Ana River	0.7	10/29/48	Charles MacClosky	Bridge & Approaches	311,100
	Orange			Various Locations				Minor Contracts & D.L. Projects	12,795
0-14TC55	Placer	3	Rsv, A	In Roseville	3.3	10/19/48	Guy F. Atkinson Co.	Grade, Pave & Structures	1,537,600
0-3TC60-F	Placer	37	A	Auburn to Applegate	6.1	5/20/49	United Conc. Pipe Corp. Ralph A. Bell, & Westbrook & Pope	Grade & Structures	1,186,463
0-2TC26	Plumas	21	A	Bet. Rock Creek & Belden	1.9	4/21/48	Piombo Const. Co. & M & K Corp.	Grading	952,618
0-2KC22	Plumas	21, 29	BC, A	Howells to 0.25 Mi. W. of Keddie & Chester to Westwood	27.3	8/25/48	Howard B. Folsom	Seal Coat	42,681
	Plumas			Various Locations				Minor Contracts & D.L. Projects	19,645
0-8VC41	Riverside	19	A	Mira Loma to 2.5 Mi. W. of Riverside		6/28/49	Covina Const. Co.	Grade & Surface	44,037

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
I-8VC32	Riverside	26	D	Garnet to Edom	10.4	4/ 1/49	R. P. Shea Const. Co.	Plant Mixed Surfacing	$144,782
I-8VC36	Riv, SBd	43	Riv, C, F	Russell St. to San Bernardino County Line	2.6	5/26/49	J. A. Payton	Grade & Surface	520,914
I-11VC39	Riverside	64	B, D	Bet. Shavers Well & Desert Center and bet. 4 Mi. W. of Hopkins Well & Black Butte	10.9	4/21/49	Hensler Const. Corp.	Road Mixed Surface	72,628
8VC27	Riverside	77	A	San Diego County Line to N. of Temecula	5.9	6/24/48	Morrison-Knudsen Co., Inc.	Grade, Surface & Bridges	711,514
I-8VC37	Riv, SBd	77, 26	A, C, E, A, Rld	See San Bernardino County					
0-14VC86Y	Riverside	77	E	West of Corona		5/25/49	R. M. Price Co. & O. B. Pierson	Five Structures	510,901
0-14VC88	Riverside	146	A, B, C	3.3 Mi. N. of Imperial County Line to 4.0 Mi. N. of Blythe		6/18/49	E. G. Perham	Bridges	52,767
I-8VC34	Riverside	187	PSp	In Palm Springs	2.5	5/10/49	R. P. Shea Co.	Plant Mixed Surface	23,788
	Riverside			Various Locations				Minor Contracts & D.L. Projects	4,750
3TC46	Sacramento	3	B	No. Sac'to Viaduct to 0.5 Mi. E. of Ben Ali		2/ 4/48	Master Plumbing & Heating Co., Inc.	Landscaping	80,532
0-3TC54	Sacramento	11	B, A	1 Mi. W. of Nimbus to E. of White Rock	7.3	6/18/48	Geo. Pollock Co.	Grade, Pave & Structure	720,989
14TC32-FP	Sacramento	11	C	At Three Mile Slough		11/ 5/47	Judson-Pacific-Murphy Corp.	Bridge Superstructure	570,960
14GFC2-P	Sacramento		Sac	On 12th St. near B St. in Sacramento	0.2	6/ 3/48	Bates & Rogers Const. Corp.	Underpass & Approaches	722,750
14DC47	Sac, SJ	FAS 540		See San Joaquin County					
	Sacramento			Various Locations				Minor Contracts & D.L. Projects	6,558
0-14TC38	SBt, SCr	67	A, A	At Pajaro River	0.9	4/ 1/48	Dan Caputo & Edward Keeble	Bridge & Approaches	197,573
0-5TC13	San Benito	119	E	Tres Pinos to 0.25 Mi. N.	0.3	6/22/49	Granite Const. Co.	Grade & Surface	31,498
14DC48	San Benito	FAS 670		Bet. 3.0 Mi. & 12 Mi. N. of Hollister		4/ 1/49	Wm. E. Thomas Const. Co.	Six Bridges	28,650

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
8V36	San Bernardino	9	D, Upl, A, C	Los Angeles County Line to San Bernardino	8.8	10/20/48	Day Labor	Resurface & Stripe	$7,500
I-8VC37	SBd, Riv	26, 77	E, A, Rld, C, A	At Various Locations	23.4	6/ 9/49	G & H Paving Co.	Seal Coat	36,392
I-8VC36	SBd, Riv	43	F, Riv, C	See Riverside County					
0-8VMC5-P	San Bernardino	58	N, Ned	Bet. "R" St. & Walnut St. in Needles	0.4	5/ 6/49	Ken Lowe	Grade & Surface	12,331
-8VC40	San Bernardino	59	C	0.9 Mi. to 3.8 Mi. E. of Rte. 31	2.9	6/22/49	Herz Paving Co.	Surfacing	10,675
8V34	San Bernardino	59	C	0.9 Mi. E. of Cajon to Sec. Mi. 3.8	2.9	7/ 1/48	Day Labor	Grade & Widen	15,000
I-8VC38	San Bernardino	190	G	Erwin Lake to 1 Mi. E. of Rte. 43	3.0	6/18/49	Geo. Herz & Co.	Apply B.S.T.	23,067
0-8VC18	San Bernardino	207	A	0.7 Mi. E. Plunge Creek to Long Point	1.8	4/ 1/48	Claude Fisher Co., Ltd. & L. R. & R. S. Crow	Grade & P.M.S.	775,219
8V35	San Bernardino	207	A	0.7 Mi. E. Plunge Creek to Long Point	1.8	9/13/48	Day Labor	Signs & Stripe	5,400
I-8VC31	San Bernardino	207	A	Long Point to W. of Running Springs	4.0	4/ 6/49	Fredericksen & Kasler	Grade & Surface	879,395
8DC8	San Bernardino	FAS 714		On Pigeon Pass Road	8.4	1/ 7/49	Basich Bros. & Basich Bros. Const. Co.	Grade & P.M.S.	445,000
	San Bernardino			Various Locations				Minor Contracts & D.L. Projects	10,300
I-11VC45	San Diego	2	B, C	Bet. San Marcos Creek & Carlsbad and bet. Oceanside & Las Flores	4.3	5/13/49	R. P. Shea Co.	Surfacing	61,656
0-11VMC20	San Diego	12	SD	On Canon Street	0.5	6/28/49	Pace Const. Co.	Resurface & Install Storm Drains	92,990
0-11VC41	San Diego	77	A	San Diego to Miramar	6.5	11/10/48	R. E. Hazard Const. Co. & C. G. Willis & Sons	Grade & C.T.B.	730,651
0-11VC30-FP	San Diego	77	A, B	Miramar to Lake Hodges	12.0	6/16/48	Griffith Co.	Grade, Pave & Structure	1,737,699
0-11VC46	San Diego	77	B, Esd	15th Ave. to Grant Ave.	1.7	6/18/49	Jannoch Nurseries	Landscaping	19,186
0-11VVC1	San Diego	77	Esd	At Fifth Ave. & at Grand Ave.		6/28/49	Clinton Elect. Corp.	Signals & Lighting	19,705
I-14VC83	San Diego	78	A	At Sweetwater River	0.4	4/14/49	Thomas Const. Co.	Bridge & Approaches	68,516
0-11VC37	San Diego	78	B, C	Julian to Santa Ysabel	1.5	9/ 1/48	E. C. Young & Co.	Grade & Surface	187,892

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
I-11VC43	San Diego	78 198	C, H	Near Santa Ysabel & W. of Ramona	1.3	5/ 6/49	Clifford C. Bong & Co.	Grade & Surface	$75,425
11DC1-P	San Diego	732, 12	LMsa	Fairmont Extension to Rte. 12	5.0	9/27/48	Daley Corp.	Grade, Surface & Structures	837,329
	San Diego			Various Locations				Minor Contracts & D.L. Projects	8,295
4T103	San Francisco	2	SF	On Alemany Blvd., from Sta. 36 to Bayshore Blvd.		3/29/48	Day Labor	Reconstruction	96,000
I-4TC82-F	San Francisco	68	SF	Augusta to 25th St.	1.3	5/11/49	Guy F. Atkinson Co. & Chas. L. Harney, Inc.	Grade, Surface, Structures, and Signals & Lighting	3,065,348
14GF9	San Francisco		Fdr	Inters. of 3d & Carrol Sts. and 3d & 25th Sts.		1/14/48	Day Labor	Signals	12,205
	San Francisco			Various Locations				Minor Contracts & D.L. Projects	420
I-10TC46	SJ, Sta	4	A, Rip, C, B	See Stanislaus County					
I-10TC45-F	San Joaquin	4, 5	E, Stkn, C, Stkn	Bet. Mariposa Road & Calaveras River and bet. Wilson Way & New Rte. 4 in Stockton	7.2	4/ 1/49	United Conc. Pipe Corp.	Grade, P.C.C. & P.M.S.	1,137,681
14TC25-F	San Joaquin	5	B	Across San Joaquin River at Mossdale		9/22/47	Judson-Pacific-Murphy Corp.	Bridge Superstructure	437,663
I-10TC43	San Joaquin	41	A	Southerly Boundary to Rte. 5	8.3	4/ 1/49	M. J. Ruddy & Son	U.R.B. & Surface	126,047
I-14TC62	San Joaquin	53	C	At Potato Slough		4/ 1/49	R. G. Clifford	Reconstruct Bridge	60,500
I-10TC47	San Joaquin	66	B	Brennan Road to Easterly Boundary	5.2	4/12/49	Granite Const. Co.	Surfacing	96,322
I-10TC51	San Joaquin	75	A	Old River to Middle River	4.3	6/15/49	M. J. Ruddy & Son	Surfacing	109,078
14DC47	SJ, Sac	FAS 540		Across Mokelumne River		1/ 7/49	Lord & Bishop	Bridge & Approaches	267,500
	San Joaquin			Various Locations				Minor Contracts & D.L. Projects	14,961
I-5VC26-F	San Luis Obispo	2	D	Cuesta Siding to 1 Mi. S. of Santa Margarita	2.1	4/20/49	Granite Const. Co.	Grade & P.M.S.	467,182
5VC19-F	San Luis Obispo	2	PBch, E	Bet. Pismo Beach & Miles Station	4.9	4/29/48	Fredericksen & Kasler	Grade, Surface & Bridge	1,120,517

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
I-5VC29	San Luis Obispo	33, 125	C, D	Cholame to Kern County Line	4.0	5/10/49	Valley Paving & Const. Co., Inc.	Resurface	$143,038
5DC7	San Luis Obispo	FAS 1085		Bet. Rte. 2 in San Miguel & 0.4 Mi. E. of Estrella	4.2	4/20/49	Eaton & Smith	Grading	68,200
	San Luis Obispo			Various Locations				Minor Contracts & D.L. Projects	10,361
I-4TC87	San Mateo	56	A	At Cypress Creek, 0.6 Mi. N. of SCr-SM Co. Line	0.3	6/ 7/49	Granite Const. Co.	Grade & Surface	33,583
0-4TC81	San Mateo	56	C, D	Half Moon Bay to Montara Creek	5.0	4/14/49	A. Teichert & Son, Inc.	Grade & Surface	418,516
4T81	San Mateo	68	SSF, F, Burl	Colma Creek to Broadway in Burlingame	4.9	4/29/48	Day Labor	Signs & Stripe	20,000
	San Mateo			Various Locations				Minor Contracts & D.L. Projects	16,850
5V44	Santa Barbara	2	D	Nojoqui River to Santa Ynez River	0.35	5/24/49	Day Labor	Guard Rail	6,100
0-5VC25	Santa Barbara	2	F	Bet. Arroyo Quemado & Arroyo Hondo	2.6	9/27/48	Clyde W. Wood, Inc.	Grade, Surface & Culverts	763,431
I-5VC28	Santa Barbara	2	L, A	Orcutt Wye to Santa Maria	2.0	6/30/49	Madonna Const. Co.	Grade & Surface	248,003
I-5VC27-P	Santa Barbara	56	B	Jalama Road to Rte. 149	4.3	4/20/49	Rand Const. Co., Inc.	Grade & Surface	331,524
5DVC1-P	Santa Barbara	56	E	Bet. Black Road & Point Sal Road	5.5	3/16/48	Madonna Const. Co.	Grade, B.S.T. & Overcrossing	267,220
0-5VC30-P	Santa Barbara	148	SMra	Railroad Ave. to WCL of Santa Maria	0.5	6/22/49	Madonna Const. Co.	Grade & Surface	57,794
	Santa Barbara			Various Locations				Minor Contracts & D.L. Projects	3,440
I-4TC74	Santa Clara	2	B	Ford Road to Morgan Hill	6.1	4/ 1/49	McGillivray Const. Co.	Resurfacing	114,516
4T59	Santa Clara	2	B	0.5 Mi. N. of Coyote		3/31/47	Dya Labor	Install Truck Scales	9,200
0-4TTC8-P	Santa Clara	2	SCl	Intersections of Clay St. with Lafayette St. & Grant St. with Franklin St.		6/15/49	Severin Electric Co.	Signals & Lighting	19,208
4TT54	Santa Clara	115	A	Inter. of White Road & Alum Rock Ave.		12/30/48	Day Labor	Signals & Lighting	7,810
4DC13	Santa Clara	FAS 1012		Bet. McLaughlin Ave. & White Rd. on Story Rd.	2.5	2/10/49	Leo F. Piazza	Grade & Surface	81,800
	Santa Clara			Various Locations				Minor Contracts & D.L. Projects	7,040

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
4T118	Santa Cruz	56	A, E, SCr	Vicinity of Arana Gulch		6/29/49	Day Labor	Grade & Surface	$15,000
0-4TC47-F	Santa Cruz	56	D, E, SCr	Bet. Rob Roy Junction & Morrissey Avenue	7.7	4/ 1/48	N. M. Ball Sons	Grade & Surface	1,342,301
0-4TC71	Santa Cruz	56	D, E, SCr	Bet. Rob Roy Junction & Morrissey Avenue		9/17/48	Granite Const. Co.	Highway Lighting	25,063
0-14TC38	SCr, SBt	67	A, A	See San Benito County					
	Santa Cruz			Various Locations				Minor Contracts & D.L. Projects	18,625
I-2TC30	Shasta	3	A	Anderson to Clear Creek	5.8	4/15/49	Frederickson & Watson Const. Co.	Grade, Surface & Structures	796,464
0-2TC35-P	Shasta	3, 20, 1074, 1076	A, Rdg, C, A, B	Near Redding (various) & Fall River Mills	22.7	6/ 6/49	Morgan Const. Co.	Seal Coat	34,296
0-2TC33	Sha, Sis	3	C, D, A Dmr, MSha	Crespo's to Spring Hill	35.1	6/ 1/49	McGillivray Const. Co.	Resurface & Seal Coat	456,020
0-2TC36	Shasta	28	C	6 Mi. W. of Burney	1.0	6/28/49	W. B. Jones	Grade & Surface	35,786
	Shasta			Various Locations				Minor Contracts & D.L. Projects	6,145
3DC9	Sierra	FAS 524		Sierraville to 5.6 Mi. N'ly.	5.6	7/13/48	Nevada Constructors, Inc.	Grade & RMS	119,160
I-2TC32	Siskiyou	3	A	Spring Hill to Weed	4.4	4/15/49	Harms Bros. & F. Fredenburg	Grade & Structure	385,636
I-2TC31-F	Siskiyou	3	C	Camp Lowe to Bailey Hill	7.8	4/ 1/49	A. Teichert & Son, Inc.	Surfacing	306,391
0-2TC33	Sis, Sha	3	Dmr, MSha, A, C, D	See Shasta County					
I-14TC59	Siskiyou	46	A	At Dillon Creek	0.3	4/ 1/49	G. M. Carr & Bati Rocca	Bridge & Approaches	176,565
I-14TC67	Siskiyou	46	A	At Clear Creek, about 9 Mi. S. of Happy Camp		5/21/49	G. M. Carr & Bati Rocca	Bridge & Approaches	138,326
2T75	Siskiyou	46	B	Happy Camp to Cade Mountain (portions)	4.2	5/ 2/49	Day Labor	Widen & Surface	12,500
2T78	Siskiyou	46	C	At Scott River		6/29/49	Day Labor	Repair Bridge	15,000
	Siskiyou			Various Locations				Minor Contracts & D.L. Projects	26,239

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
0-10TC35	Solano	7	B, C	Ledgewood Creek to 3.5 Mi. E. of Fairfield	4.7	7/20/48	Parish Bros.	Grade, Pave & Bridges	$1,275,021
0-10TC39	Solano	7	B, C	Near Fairfield	------	9/27/48	L. H. Leonardi Elect. Const. Co.	Signals & Lighting	21,627
10TC34	Solano	7	C	E. of Fairfield to E. of Alamo Creek	4.3	6/24/48	Harms Bros.	Grade, Pave & Bridge	866,475
I-10TC48	Sol, Yol	7, 6	D, I, A, E, A	E. of Ulatis Creek to W. of Yolo Causeway	------	5/12/49	Harms Bros	Curbs, Barrier Posts & Widen Cross-overs	73,637
0-10TC50	Solano	7	F, G	Near Vallejo	------	6/14/49	Tri-Cities Electrical Serv., Inc.	Signals & Lighting	49,799
10TC27	Solano	7, 74	F, G, D	Bet. Vallejo Wye & 0.5 Mi. N. of Rte. 208	5.6	2/16/48	Parish Bros	Grade, Pave & Structure	1,465,057
10T74	Solano	7, 74	F, G, D	Bet. Vallejo Wye & 0.5 Mi. N. of Rte. 208	5.6	5/17/49	Day Labor	Signs & Stripes	6,610
0-10TC36	Sol, Nap	7	H, A	1 Mi. W. of Napa County Line to Cordelia Underpass	4.6	7/17/48	Parish Bros.	Grading	601,960
10T73	Solano	7, 6	I, A	At Milk Farm Inter. & Frese Corner Inter.	------	3/23/49	Day Labor	Channelization	8,800
	Solano	------	------	Various Locations	------	------	------	Minor Contracts & D.L. Projects	17,809
I-4TC85	Sonoma	1	A	Cloverdale to Healdsburg	4.8	5/19/49	A. G. Raisch Co.	Grade & Surface	173,344
0-4TC75	Sonoma	51	C	At Purple Draw & at Laguna de Santa Rosa	0.3	3/15/49	A. G. Raisch Co.	Widen Bridge & Culvert	64,430
14DC37	Sonoma	FAS 788	------	Across Russian River, about 2 Mi. N. of Healdsburg	------	6/16/48	C. B. Tuttle Co.	Bridge & Approaches	380,400
	Sonoma	------	------	Various Locations	------	------	------	Minor Contracts & D.L. Projects	32,800
I-10TC46	Sta, SJ	4	B, A, Rip, C	Bet. Salida & 1 Mi. N. of Ripon & bet. Calaveras River & Lodi	11.9	4/ 1/49	Henry C. Soto Corp.	Landscaping	13,249
10DC6	Stanislaus	FAS 915	------	At San Joaquin River, 4.5 Mi. NE. of Crows Landing	0.6	6/ 3/49	Karl C. Harmeling	Grade & Surface	36,000
14DC38	Stanislaus	FAS 915	------	At San Joaquin River, 4.5 Mi. NE. of Crows Landing	------	6/21/48	Bos Const. Co.	R. C. Bridge	181,300
	Stanislaus	------	------	Various Locations	------	------	------	Minor Contracts & D.L. Projects	2,581

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
3DC13	Sutter	FAS 926		Sacramento County Line to S. of Striplin Road	7.9	2/17/49	P. J. Moore & Son & Harms Bros.	Grade & Seal Coat	$246,365
14DC46	Sutter	FAS 926		Over Cross Canal, about 6 Mi. S. of Nicolaus		11/22/48	Lord & Bishop	R. C. Bridge	128,500
14DC45	Tehama	FAS 1078 1081 1083		Across Reeds Cr., Paynes Cr., & Thomes Cr.		10/19/48	O'Connor Bros.	3 Bridges & Approaches	294,800
1T68	Trinity	35	B	Peanut to Hayfork	5.9	3/11/49	Day Labor	Grade & Surface	15,000
2DC10	Trinity	FAS 1089		Rte. 20 to Brown's Mountain	6.3	8/25/48	Morgan Const. Co.	Seal Coat	14,200
	Trinity			Various Locations				Minor Contracts & D.L. Projects	4,990
0-6VC35	Tulare	4	B	1 Mi. South of Tipton to Tulare Airport	7.8	6/ 1/49	N. M. Ball Sons	Pave, PCC & PMS	692,794
6VC22	Tulare	4	F	South of Tagus to Rte. 10	5.0	6/18/48	Guy F. Atkinson Co.	Grade, Pave & Bridge	863,223
0-14VC87	Tulare	133	A	Across St. John's River, 4.0 Mi. NE. of Visalia	1.2	6/ 7/49	Anderson Co.	Surface & Construct Bridge	160,393
6DC18	Tulare	FAS 1128		Bet. 3.5 Mi. W. of Porterville & Porterville	3.2	4/ 1/49	Ted F. Baun	Plant Mixed Surfacing	94,100
	Tulare			Various Locations				Minor Contracts & D.L. Projects	10,580
	Tuolumne			Various Locations				Minor Contracts & D.L. Projects	5,439
I-7VC121	Ventura	2	C	Montalvo to Ventura	1.8	6/ 1/49	Baker & Pollock	Surfacing	63,000
7VC84	Ventura	2	F	Seacliff to Mussel Shoal	1.2	6/29/48	Clyde W. Wood, Inc.	Grade & Surface	1,041,670
0-7VC129	Ventura	60	B	Inters. of Oxnard Blvd. with Saviers Rd. & Gonzales Rd.		6/28/49	Tri-Cities Electrical Serv., Inc.	Signals & Lighting	12,255
0-14VC74	Ventura	60	B	0.5 Mi. W. of El Rio		11/ 5/48	Grant L. Miner	Widen Underpass	132,355
0-7VC126	Ventura	60	B, Oxn	Rte. 2 to Oxnard	2.1	6/18/49	Griffith Co.	Grade & Pave	265,902
I-7VC123	Ventura	79	A	Wells Road to Ellsworth Barranca	1.4	6/ 7/49	C. J. B. Const. Co.	Resurfacing & Widening	36,988
I-7VC124	Ventura	138	A	2.5 Mi. to 6.4 Mi. N. of Ventura City Limits	4.0	6/ 6/49	Frank T. Hickey, Inc.	Resurface & Shoulders	96,489

INCOMPLETE CONTRACTS—Continued

Contract number	County	Route	Section	Location	Miles	Contract date	Contractor	Type of work	Allotment
7V136	Ventura	138	B	At Matilija Creek	0.2	10/22/48	Day Labor	R. C. Bridge	$60,000
I-7VC119	Ventura	153	B	Bet Rte. 2 at Camarillo & Rte. 9 at Somis	4.2	5/26/49	Frank T. Hickey, Inc.	Resurface	81,929
	Ventura			Various Locations				Minor Contracts & D.L. Projects	3,800
3T89	Yolo	7	A	S.P. Crossing at Mullen		1/13/49	Day Labor	Improve Crossing	6,000
I-10TC48	Yol, Sol	7, 6	D, I, A, E, A	See Solano County					
I-3TC61	Yolo	50	C	At Saltroyer & Salt Creeks	0.7	5/11/49	O'Connor Bros.	2 R. C. Culverts & Approaches	48,000
I-14TC63	Yolo	87	A	Across Sacramento River at Knights Landing		4/ 1/49	B. S. McElderry	Repair Bridge	37,285
I-3TC59	Yolo	90	A, B	Winters to Rte. 7	16.1	4/19/49	McGillivray Const. Co.	Apply BST & Imported Base	133,119
	Yolo			Various Locations				Minor Contracts & D.L. Projects	315
0-14TC68	Yuba	3	B, Mvl	Across Yuba River		6/ 7/49	Underground Const. Co.	Repair Bridge	110,347
3DC10	Yuba	FAS 526		N. of Stanfield Hill to S. of Frenchtown Road	4.1	10/ 6/48	A. R. McEwen	Place I. B, Pene. Treat, & Seal Coat	184,719
	Yuba			Various Locations				Minor Contracts & D.L. Projects	3,200

APPENDIX D

AVERAGE CONTRACT PRICES

1912 to June 30, 1949

AVERAGE CONTRACT PRICES,[4] 1912 TO 1949

Year (beginning July 1, 1920, costs are for fiscal years ending June 30 of year shown)	Grading[2] (per cu. yd.)	Class "A" (6 sacks per cu. yd.) Portland cement concrete pavement, including all materials (per cu. yd.)	Class "B"[3] (5 sacks per cu. yd.) Portland cement concrete pavement, including all materials (per cu. yd.)	Asphalt concrete, including all materials (per ton)	Plant mixed surfacing, including all materials (per ton)	Portland cement concrete structures (per cu. yd)	Bar reinforcing steel (per lb.)	Structural steel (per lb.)
1912	$0 39		$5 82	$6 04				
1913	0 46		5 91	6 46				
1914	0 51		6 75	6 71				
1915	0 45		6 26	6 80				
1916	0 37		6 37					
1917	0 73	$8 03		8 52				
1918	0 78	10 51						
1919	0 96	13 08		9 07				
1920[1]	1 10	16 25						
1921	0 94	17 34		9 40				
1922	0 71	14 29		7 92				
1923	0 74	13 18		8 10				
1924	0 75	13 49		7 27				
1925	0 59	10 85		6 43				
1926	0 44	10 58		5 13				
1927	0 50	10 74		5 68				
1928	0 56	10 23		4 70				
1929	0 45	10 23		4 52				
1930	0 42	8 69		4 46				
1931	0 32	8 42		3 74				
1932	0 28	7 17		3 17				
1933	0 23	5 94		2 72				
1934	0 27	7 33		3 17				
1935	0 29	8 00		3 37				
1936	0 42	8 52	7 44	3 36				

1937	0 36	7 72	7 50	3 51				
1938	0 29	8 00	7 33	2 84				
1939	0 29	7 58	6 88	2 94				
1940	0 22	7 44	7 68	2 97	$2 19	$18 33	$0 040	$0 083
1941	0 26		7 54	3 18	2 84	23 31	0 053	0 107
1942	0 35		9 62	4 16	4 02	29 48	0 073	0 103
1943	0 42		11 48	4 76	3 71	31 76	0 059	0 080
1944	0 50		10 46	4 50	4 10	31 99	0 054	0 132
1945	0 51		10 90	4 88	4 20	37 20	0 059	0 102
1946	0 41		9 48	4 68	4 00	37 38	0 060	0 099
1947	0 46		12 38	5 38	4 32	48 44	0 080	0 138
1948	0 55		13 04	5 38	4 30	49 86	0 092	0 126
1949	0 49		12 28	4 64	4 67	48 67	0 096	0 117

[1] Only a 6-month period, January 1, 1920, to June 30, 1920.
[2] Includes all earthwork to 1924. Does not include structure excavation since 1924. Roadway excavation only since 1939.
[3] 1:2½:5 mixture used 1912 to 1916.
[4] Weighted averages.

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15196 9-49 6M